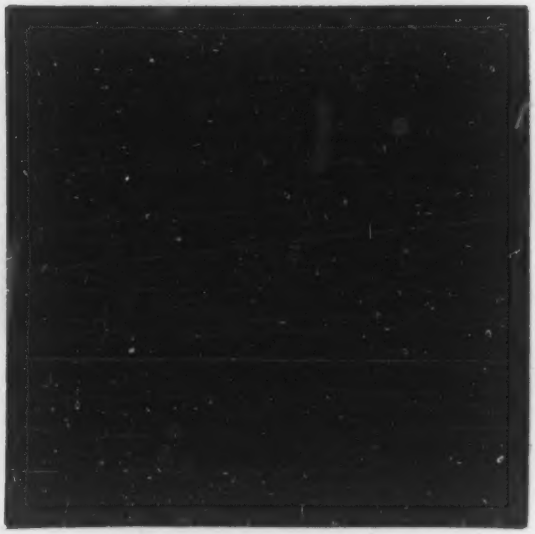
OHIO DEPARTMENT OF DEVELOPMENT
Division of Energy



State of Ohio
Richard F. Celeste/Governor
Clarence D. Pawlicki/Director

An Assessment of the Supplies of Natural Gas and Fuels for Generating Electricity in Ohio

July, 1985 - June, 1986

STATE OF OHIO
Richard F. Celeste, Governor
Alfred S. Dietzel, Director

Department of Development

P.O. Box 1001 • Columbus, Ohio • 43216-1001

August 15, 1985

The Honorable Richard F. Celeste
Governor
Statehouse
Columbus, Ohio 43215

Dear Governor Celeste:

Pursuant to ORC 4905.14, each public electric and gas utility in Ohio is required to file with the Ohio Department of Development, Division of Energy, a report on July 1 and November 1, containing projections of the utility's total demand and fuel supply over the following 12 months. As required by the same statute, we sent copies of the utilities' latest reports to you in July.

The attached report is a summary and analysis of these reports, also required by 4905.14. It includes an evaluation of the Ohio natural gas and electric situation for the coming winter and the next twelve months. It appears at this time that fuel supplies for manufacturing and heating, and for generating electricity will be adequate, even with a 10 percent colder than normal winter and Ohio's increasing industrial activity.

Since House Bill 381, effective October 17, 1985, eliminates the statutory language requiring the preparation of this summary and analysis, the attached report is the last one you will receive.

Sincerely,

Clarence D. Pawlicki
Director

CDP/kt

cc/David Johnson, Director, Legislative Service Commission
Harry Meshel, Minority Leader of the Senate
Paul Gillmor, President of the Senate
Vern Riffe, Speaker of the House
Corwin Nixon, Minority Leader of the House
Thomas Chema, Chairman, Public Utilities Commission

EXECUTIVE SUMMARY

Based on one year forecasts submitted by each of the major electric and natural gas utility companies serving Ohio, and based on independent projections of the Ohio Division of Energy, the supplies of fuels for generating electricity and supplies of natural gas for heating and manufacturing are forecast to be adequate through June 1986. The forecast takes into account the possibility of a 10 percent colder than normal winter and the increased energy demand resulting from accelerating statewide economic recovery.

Supplies of coal, used to generate more than 95 percent of the electricity in Ohio, are not expected to fall below a safe supply margin for any generating utility company through June 1986.

Supplies of the eight major natural gas distribution companies serving the state are expected to be adequate through June 1986. In addition to the actual delivered product, gas in storage will be sufficient to meet additional demand in the event of a 10 percent colder than normal winter or strong industrial recovery.

As in past years, roughly fifty percent of the coal supplied to Ohio electric utilities is from out of state sources. Approximately ninety percent of Ohio's natural gas supply will continue to come from out of state sources.

An Assessment of the Supplies of Natural Gas
and Fuels for Generating Electricity in Ohio
from July 1985 - June 1986

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I. INTRODUCTION

This report has been prepared by the Ohio Department of Development, Division of Energy (ODOE), pursuant to Section 4905.14(E) of the Ohio Revised Code. The statute requires ODOE to provide a summary, analysis and recommendations based on the Ohio public utilities' energy supply and demand projections for the twelve month period beginning July 1, 1985. In accordance with Section 4905.14(D), a copy of each utility's July forecast was submitted to the Governor, the President of the Senate, the Minority Leader of the Senate, the Speaker of the House, the Minority Leader of the House, and the Public Utilities Commission of Ohio on July 10, 1985. The utilities' forecasts and historical data are the primary input for this report. Several other sources of information have also been used, including historical energy data developed by the Ohio Division of Energy, federal energy reports, and publications from the American Gas Association and the Electric Power Research Institute. A substantial and successful effort has been undertaken to develop a comprehensive data base and a consistent and comprehensive analytical methodology which supports the Division of Energy's ability to provide timely analyses and forecasts.

Objectives

Major objectives guiding the preparation of this report are:

1. To provide historical data on energy usage, projections of energy availability and projections of consumption for the coming year.
2. To provide an analysis and an interpretation of short-term changes in energy supply and demand.
3. To provide an assessment of the adequacy of natural gas and electric energy supply for the upcoming twelve months.
4. To provide a strategy to prevent or mitigate any interruption or curtailment of service, if a potential deficiency is identified.

Requirements and Scope of This Report

Utilities are required to file short-term forecast information by Ohio Revised Code Section 4905.14, effective July 1, 1978. The Division prepares a summary and analysis of this information under paragraph (E) of this section.

The municipal utilities, industrial facilities and the rural electric cooperatives are not required to file the semi-annual report. Accordingly, this report incorporates data from the major electric and gas utilities serving the state. The Ohio Division of Energy estimates that in 1984 the major utilities provided approximately 90 percent of the electricity consumed in the state and 92 percent of the natural gas.

Ohio Division of Energy Forecasts

As part of its analysis, the Ohio Division of Energy makes its own independent forecasts to serve as validation checks. The Division has the capability to forecast monthly demand by utility and for the state as a whole within a reasonable level of error (less than five percent in most c es). Such forecasts are based on historical month-by-month actual consumption for both electricity and natural gas and other appropriate variables such as population, income, and temperature data. Energy consumption is strongly influenced by the prevailing general economic conditions. In short run forecasts, assumptions pertaining to the business cycle are especially important. Independent forecasts presented in this report are based upon the following general assumptions:

1. As the economic recovery of 1983-85 starts to level off increases in the price level will reduce the rate of growth of real personal income.
2. No change in population is expected during the forecast horizon implying stable household and per capita real personal incomes.
3. Interest rates will remain high as long as the national budget deficit is not reduced.
4. The recovery will not affect all segments of Ohio industry. The continuing restructuring of Ohio industry will result in unemployment rates of 8 to 9.5% throughout the forecast horizon.

Overview of This Report

The report is divided into two parts: electric energy and natural gas. Materials presented in these two parts are, for the most part, parallel in arrangement. They contain:

(a) a profile of reporting utilities;
(b) historical sources of supplies and suppliers;
(c) consumption history by sector, utility, and state;
(d) the utilities' forecasts and independent forecasts by the Ohio Division of Energy.

Temperature and Energy Consumption

Changes in the observed annual energy requirements of the three major consuming sectors (industrial, commercial, residential) may be explained by a variety of factors. Temperature is a variable which explains much of the observed variation. It is particularly significant in the residential and commercial sectors, during summer and winter periods, when electricity and natural gas are used to maintain comfortable room temperatures.

Two indicators which measure temperature-sensitive energy requirements are heating degree days and cooling degree days. The daily mean temperature is obtained by adding together the maximum and minimum temperatures reported for the day and dividing the total by two. When the daily mean temperature is 65° F, the degree day total is zero. Each degree of mean temperature below 65° F is counted as one heating degree day. This indicator is convenient because the amount of heat required to maintain a certain temperature level is proportional to heating degree days.

The cooling degree days are defined similarly: Each degree of mean temperature above 65° F is counted as one cooling degree day. If the daily mean temperature is 65° F or lower, the cooling degree day total is zero.

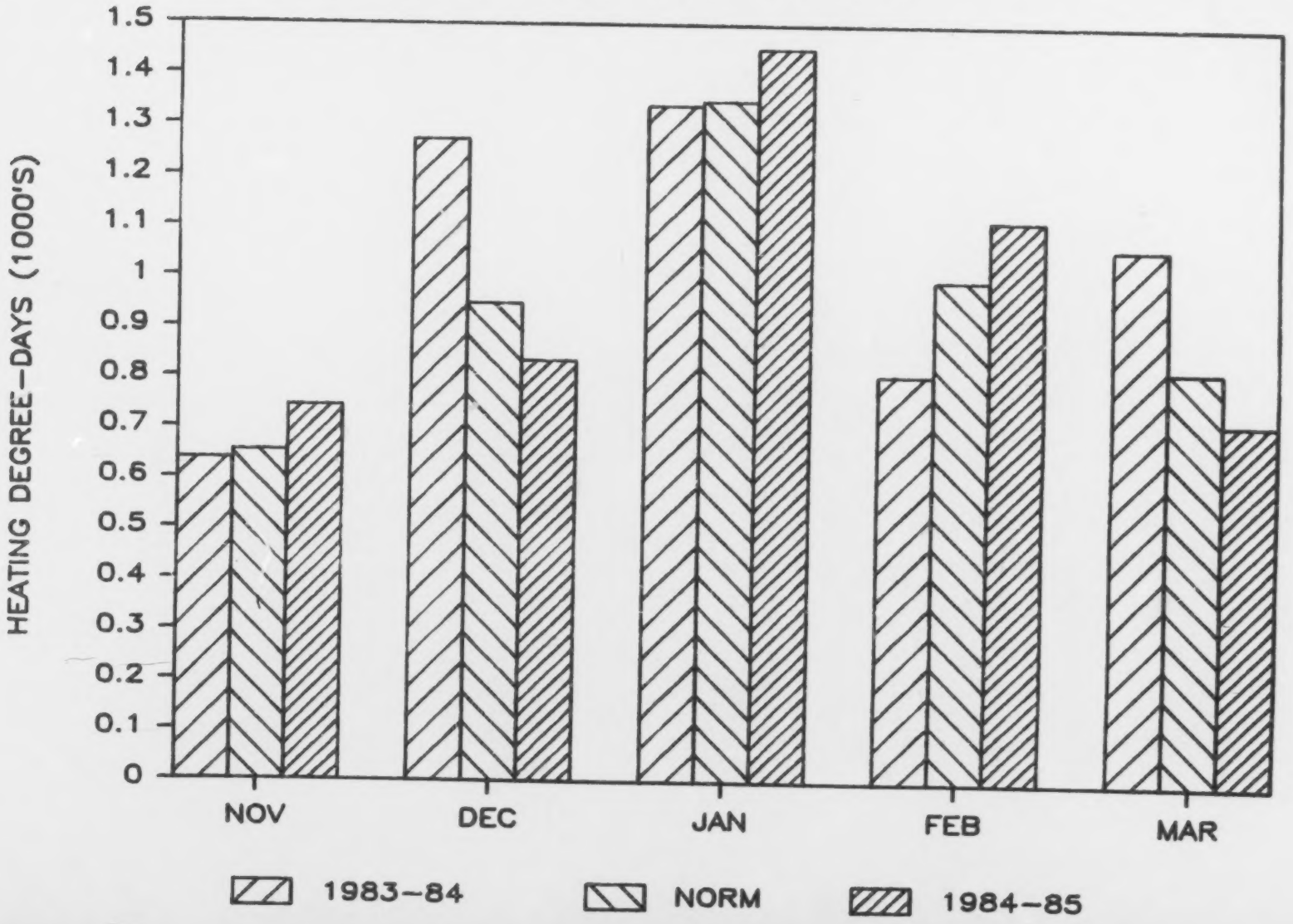
Since most homes and commercial buildings in Ohio are heated by natural gas, the reporting gas utilities are required to submit supply and demand forecasts under a normal winter scenario and a 10 percent colder than normal winter scenario. In addition, the relationship between natural gas consumption and heating degree days is closely monitored during the winter heating season (from November through March). Table 1 and Figure 1 show, for the past two heating seasons, population-weighted state heating degree day summaries. In addition, a normal heating degree day series, defined as the 30-year average of the years 1941 to 1970, is also presented.

TABLE 1. POPULATION-WEIGHTED
HEATING DEGREE-DAY SUMMARY FOR OHIO
NOVEMBER 1983 to MARCH 1985

MONTH	1984-1985	NORM	1983-1984
NOVEMBER	744	654	638
DEVIATION FROM NORM	13.8%		-2.4%
DEVIATION FROM PREVIOUS YEAR	16.6%		5.3%
DECEMBER	835	948	1272
DEVIATION FROM NORM	-11.9%		34.2%
DEVIATION FROM PREVIOUS YEAR	-34.4%		64.3%
JANUARY	1354	1350	1341
DEVIATION FROM NORM	0.3%		-0.7%
DEVIATION FROM PREVIOUS YEAR	1.0%		22.0%
FEBRURARY	1115	997	809
DEVIATION FROM NORM	11.8%		-18.9%
DEVIATION FROM PREVIOUS YEAR	37.8%		-8.9%
MARCH	720	822	1062
DEVIATION FROM NORM	-12.4%		29.2%
DEVIATION FROM PREVIOUS YEAR	-32.2%		46.3%

SOURCE: National Oceanic and Atmospheric Administration, Historical Climatology Series 5-1 and the Ohio Division of Energy.

FIG. 1. POPULATION-WEIGHTED DEGREE DAYS FOR OHIO WINTER HEATING SEASONS (1983 AND 1984)



II. ELECTRICITY

This section is based on the July forecasts filed by nine major Ohio electric utilities. Two of these, Columbus and Southern Ohio Electric Company and Ohio Power Company, are subsidiaries of the American Electric Power Company. Since American Electric Power operates as a centrally dispatched, integrated distribution system, the report reviews forecasts of demand and fuel adequacy for the entire American Electric Power Company. The Allegheny Power System is also a centralized power generation and distribution system. One subsidiary Monongahela Power, operates in Ohio. Thus, the forecasts of eight utilities are presented in the report. They are:

1. Allegheny Power System (APS)
   - Monongahela Power
   - Other out-of-state utilities not subject to reporting
2. American Electric Power Company (AEP)
   - Columbus and Southern Ohio Electric Company (C&SOE)
   - Ohio Power Company (OP)
   - Other out-of-state utilities not subject to reporting
3. Cincinnati Gas and Electric Company (CG&E)
4. Cleveland Electric Illuminating Company (CEI)
5. Dayton Power and Light Company (DP&L)
6. Ohio Edison Company (and its subsidiary Pennsylvania Power) (OE)
7. Ohio Valley Electric Corporation (OVEC)
8. Toledo Edison Company (TE)

With the exception of OVEC, each of these is an investor-owned utility supplying electricity to residential, commercial, and industrial customers in its service areas. The Ohio Valley Electric Corporation is a single-customer utility supplying power for the uranium enrichment plant at Piketon, Ohio. It also sells surplus generation to other electric utilities.

Supply and Generation

Source/Supplier of Fuel for Electric Generation

Fuels used in Ohio for electric generation include coal, oil, natural gas and nuclear fuel. Nuclear fuel sources are not monitored by the Division. All other fuels are monitored through the utilities' monthly reports. Tables 2 and 3 (following) list coal and oil deliveries to power plants located in Ohio. The main sources of supply and/or suppliers of these fuels remain the same as in the last reporting period.

Coal deliveries to Ohio electric plants during the twelve months ending April 1985, decreased by 261,500 tons from the previous twelve month period, a decrease of 0.6 percent (Table 2 and Figure 2). Deliveries of oil to Ohio power plants increased by 86,400 barrels during the twelve months ending April 1985 from the previous twelve month period, an increase of 17.2 percent (Table 3 and Figure 3). The change in coal and oil deliveries is, in part, attributable to increased generation over the previous twelve month period. They also reflect the utilities' preemptive stockpiling and drawdown in response to an anticipated coal strike in September 1984 which did not take place, and extreme weather conditions in the winter months.

Electric Generation by Type of Fuel

Coal remains the main source of fuel for electric generation in Ohio, a condition which is not expected to change in the future. In the twelve month period ending April 1985, 96.41 percent of the total electricity generated in Ohio was from coal. Electricity generated by gas and oil continues to be a negligible 0.12 percent of total generation. Nuclear-generated electricity accounted for 3.48 percent of electricity generated in the state in the twelve months ending April 1985. Davis-Besse is the only nuclear facility in Ohio currently generating electricity for sale. It began generating electricity after routine maintenance, in September 1982 and was off line for refueling in July 1983. Operations resumed in September 1983 and continued until September of 1984. The plant resumed operations in January 1985. On June 9, 1985 the plant automatically shut down due to excess pressure in the boiler chamber. The restart date is not known at this time.

Figure 4 shows the combined monthly totals of the reporting utilities' net generation from Ohio plants. Historical power plant fuel consumption and fuel stocks are displayed in Table 5.

Historical Behavior of Sectoral Requirements

Since the OPEC oil price increases of 1973 and 1978 and the subsequent escalations in inflation and energy prices, the pattern of electricity consumption in Ohio has changed dramatically. Increasing electricity prices and decreasing rates of growth of real income have stimulated conservation activities and fostered economic conditions that have resulted in reduced growth rates in the demand for electricity.

Electricity consumption by the residential and commercial sectors exhibits regular seasonal patterns while the industrial sector fluctuates widely with general economic conditions. (See Appendix A). The mild

winter of 1984-85, and cooler summer, resulted in decreased residential sector consumption (Table 6 and Figure 5A). The extremely severe weather of February 1985 resulted in increased residential consumption in that month. In December 1982, industrial electricity consumption dipped lower than any consumption level since January 1971. A severe downturn in the manufacturing sector, particularly in automobile-related industries, had resulted in a monthly industrial demand level of 3100 to 3400 megawatt-hours. Beginning in 1983 with the general economic recovery, industrial demand for electricity has gradually increased. The March 1984 consumption of 4020 megawatt-hours is the highest monthly industrial consumption since March 1981. Consumption has remained near that peak since then.

For the twelve month period ending in May 1985, total electricity consumption in the state was 1.7 percent higher than during the preceding twelve month period (see Table 6 and (Figures 5A - 5D). Comparing 1983-84 with 1984-85 usage, residential sector consumption declined 3.8 percent, commercial sector consumption rose 2.2 percent and industrial sector consumption rose 5.8 percent. Figure 5E is a comparison of the monthly electricity consumption for each sector, from January 1971 to June 1985.

Twelve Month Electricity Demand Forecasts

Each electric utility submits a forecast of total service area demand for July 1985 through June 1986. These forecasts are displayed in Appendix A, Tables A-1 through A-8, along with independent forecasts prepared by the Ohio Division of Energy. The Ohio Division of Energy also prepares independent twelve month forecasts of electricity demand for the state of Ohio, by sector. These forecasts are displayed in Appendix A, Tables A-9 through A-12.

Electric Demand Forecasts by Utility Service Area

The Ohio Division of Energy utility service area forecasts are based on monthly data from utility reports from January 1971 through April 1985. No independent forecast is provided for OVEC, because this utility has only one customer whose demand is pre-arranged. Because of the overlapping months for utility forecasts submitted on July 1 and November 1, the utilities may elect to use their previous forecasts for those overlapping months in the new forecasting period.

For the overlapping months of July - October only Allegheny Power System retained the forecasts from November. Cincinnati Gas & Electric and Cleveland Electric Illuminating raised their forecasts in each month an average of 3.5% and 1% respectively. American Electric Power, Ohio Edison and Toledo Edison raised their forecasts in three of the four months for an average increase of 1%, 4%, and 1.3% respectively. Ohio Valley Electric Company raised its forecast for November by 1%. Dayton Power and Light lowered all of its forecasts by an average of 1.4%.

The forecast of sales that was done by ODOE is generally lower than the forecasts for Appalachia Power System, American Electric Power, Ohio Edison and Toledo Edison. The forecasts of ODOE and Cincinnati Gas and Electric and Cleveland Electric Illuminating are essentially the same. The ODOE forecast is higher than the corresponding forecast by Dayton Power and Light except for one month. The difference in the forecasts of ODOE and each utility are not statistically significant except in the case of Amercian Electric Power.

Assessment of Utility Fuel Adequacy

Tables 7-A and 7-B present the utilities' projections of deliveries, consumption, and end-of-month stocks of coal and oil for the generation of

electricity. Table 7-C presents the Division's independent assessment of the adequacy of supply of generating fuels. The Division's projections are presented for the CAPCO Group of utilities, which include Cleveland Electric Illuminating, Ohio Edison, and Toledo Edison; for the American Electric Power and Allegheny Power Systems, and for Dayton Power and Light, Cincinnati Gas and Electric, and the Ohio Valley Electric Corporation.

Coal

The Division's projections, as well as those of the electric utilities indicate an adequate supply of coal throughout the forecast period for each utility serving the state.

To derive the Ohio Division of Energy projections, average daily requirements of coal were determined by dividing projected monthly coal consumption by the number of days in the month. End-of-month stocks were derived by considering consecutively end of June 1984 stocks, projected monthly coal delivery schedules as submitted by the utilities, and projected monthly coal consumption levels. Number of days' supply of coal was estimated on the basis of average daily requirements in subsequent months and the level of end-of-month stocks for the month in question.

Coal consumption projections were made through the use of a formula which adjusts coal consumption levels for changes in the consumption of oil, natural gas, and nuclear fuel in a manner that is consistent with the projected generation. In making these projections, it is assumed that the following conditions will be satisfied:

1. Monthly generation for July 1985 through June 1986 will be realized in the manner projected by the utility companies.

2. Energy required to supply projected generation in a service area from July 1985 through June 1986 will be proportional to the energy consumed in generating electricity in the previous twelve month period.
3. Monthly delivery schedules for all fuels in 1985 and 1986 will be met in the manner projected by the utility companies.
4. With the exception of Toledo Edison, all of the electricity required to meet the generation projection will be generated by coal.

Oil

Each electric utility forecasts an adequate supply of oil for the generation of electricity throughout the forecast period. The decline in oil usage in Ohio has resulted in net generation from oil of 1 percent of total net generation. Currently oil is being used as a start-up fuel and in peaking units. Due to the currently high reserve margins for all utilities, the Division does not anticipate that the utilities will generate much electricity from peaking units and consequently our projections indicate that there will be an adequate supply of oil, under normal generating conditions.

TABLE 2. SOURCE OF COAL SUPPLY TO ELECTRIC UTILITIES
OHIO PORTION
1000 Short Tons

Month	1	2	3	4	6	7&8	9	Other	Total
1983									
January	0.0	105.8	37.9	1,865.6	292.9	938.4	62.2	239.7	3,542.5
February	0.0	76.0	25.0	1,608.6	291.9	793.3	9.0	102.1	2,905.9
March	0.0	109.1	9.1	1,274.6	349.9	973.2	5.8	98.7	2,820.4
April	0.0	85.5	14.7	1,438.8	240.0	685.5	12.0	0.0	2,476.5
May	0.0	166.3	26.7	1,937.3	264.2	1,003.2	4.4	1.5	3,403.6
June	0.0	160.7	38.0	1,945.5	140.5	991.0	29.9	6.3	3,311.9
July	0.0	172.4	37.5	1,792.4	73.6	872.4	58.7	0.0	3,007.0
August	0.0	267.1	56.6	2,172.1	185.5	1,234.3	48.7	4.4	3,968.7
September	0.0	222.5	47.0	2,039.4	216.5	1,056.5	7.8	0.0	3,589.7
October	0.0	199.5	31.9	2,084.5	282.7	1,079.5	0.0	0.0	3,678.1
November	0.0	207.6	21.5	1,961.4	267.1	1,113.0	37.0	4.8	3,612.4
December	0.0	155.9	25.6	1,895.0	270.6	1,188.1	143.3	0.0	3,678.5
Total	0.0	1,928.4	371.5	22,015.2	2,875.4	11,928.4	418.8	457.5	39,995.2
% of Total	0.0	4.8	0.9	55.0	7.2	29.8	1.0	1.1	100.0
1984									
January	0.0	196.9	36.0	2,144.9	310.4	1,272.5	46.1	0.0	4,006.8
February	0.0	211.7	42.4	2,337.8	384.1	1,302.1	40.2	0.0	4,318.3
March	0.0	258.9	62.5	2,499.4	387.1	1,170.7	59.1	0.0	4,437.7
April	0.0	206.8	44.3	2,248.9	466.3	1,064.3	16.4	0.0	4,047.0
May	0.0	194.5	19.2	2,451.0	374.9	1,273.0	0.0	0.0	4,312.6
June	0.0	176.2	28.1	2,173.4	382.0	1,217.1	15.2	0.0	3,992.0
July	0.0	185.7	33.1	2,360.1	170.2	1,229.6	19.8	0.0	3,998.5
August	0.0	190.9	27.5	2,523.7	493.2	1,537.4	0.0	0.0	4,772.7
September	0.0	132.5	8.3	2,225.7	423.3	1,471.8	10.6	0.0	4,272.2
October	0.0	117.0	3.6	1,733.2	317.8	880.2	22.0	0.0	3,073.8
November	0.0	128.4	12.6	1,730.7	270.2	943.4	6.2	0.0	3,091.5
December	0.0	144.8	23.6	1,558.1	283.8	1,065.8	19.5	0.0	3,095.6
Total	0.0	2,144.3	341.2	25,986.9	4,263.3	14,427.9	255.1	0.0	47,418.7
% of Total	0.0	4.5	0.7	54.8	9.0	30.4	0.5	0.0	100.0
1985									
January	0.0	166.8	29.1	1,962.9	363.6	1,027.5	24.5	0.0	3,574.4
February	0.0	215.3	53.4	1,756.1	467.0	807.4	20.8	0.0	3,320.0
March	0.0	199.4	51.2	1,921.9	492.7	1,301.9	32.8	0.0	3,999.9
April	0.0	180.5	51.2	1,631.7	426.7	973.0	31.9	0.0	3,295.0

District

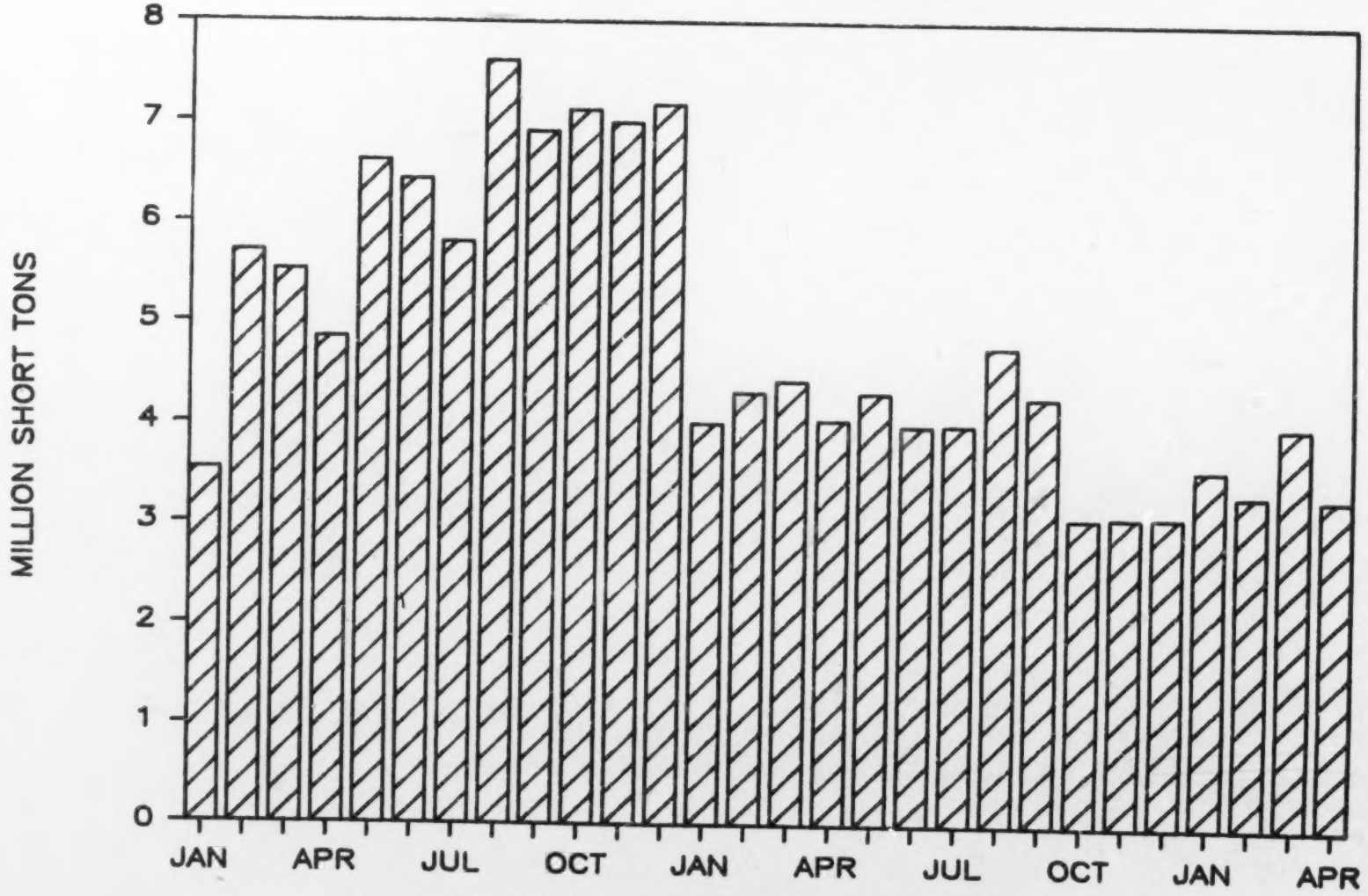
1. Eastern Pennsylvania
2. Western Pennsylvania
3. Northern West Virginia
4. Ohio
6. Panhandle (in West Virginia)
7. Southern No. 1 (in West Virginia and Virginia)
8. Southern No. 2 (in West Virginia and Eastern Kentucky)
9. Western Kentucky

Other - Primarily from Wyoming and Utah

Source: Form FPC 423

FIG. 2. MONTHLY COAL DELIVERIES TO POWER PLANTS IN OHIO

(JANUARY 1983 - APRIL 1985)



SOURCE: THE OHIO DIVISION OF ENERGY

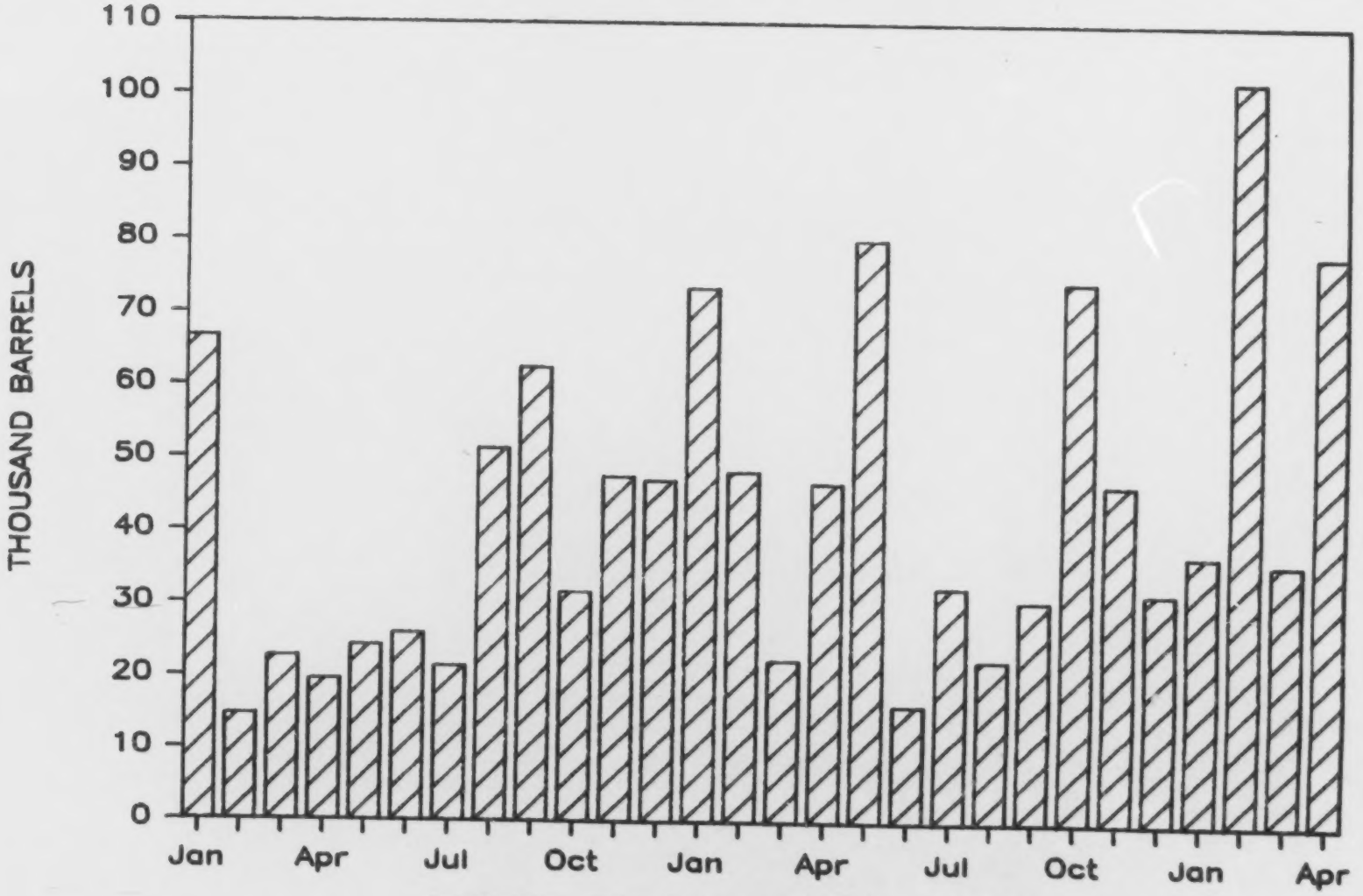
Table 3. Major Oil Suppliers to Electric Utilities
Ohio Portion
(Thousand Barrels)

1983	Allied	Marathon	Standard	Union	Other	Total
January	36.5	18.1	9.1	3.0	0.0	66.7
Feburary	7.3	0.2	5.2	2.0	0.0	14.7
March	7.0	0.6	11.1	2.0	2.0	22.7
April	6.8	0.2	9.5	2.0	1.0	19.5
May	9.2	0.4	8.5	4.0	2.1	24.2
June	10.9	0.0	11.0	4.0	0.0	25.9
July	11.5	0.2	6.7	3.0	0.0	21.4
August	38.8	0.4	4.0	3.0	5.2	51.4
September	52.4	0.2	5.1	0.0	4.9	62.6
October	14.0	0.4	14.6	1.0	1.7	31.7
November	35.7	0.2	6.1	3.0	2.6	47.6
December	18.4	0.0	16.2	2.0	10.5	47.1
Total	248.5	20.9	107.1	29.0	30.0	435.5
% of Total	57.1	4.8	24.6	6.7	6.9	100.0
1984						
January	66.0	0.2	2.4	3.0	2.0	73.6
February	38.9	0.4	2.8	1.0	5.2	48.3
March	12.8	0.4	4.5	2.0	2.7	22.4
April	40.6	3.3	0.0	0.0	2.9	46.8
May	70.6	0.6	4.5	1.0	3.6	80.3
June	11.6	0.6	3.4	0.0	0.6	16.2
July	21.5	0.2	6.7	1.0	3.1	32.5
August	12.5	0.6	4.4	0.0	5.0	22.5
September	14.9	0.2	15.6	0.0	0.0	30.7
October	45.0	0.0	29.6	0.0	0.0	74.6
November	40.0	0.0	6.7	0.0	0.0	46.7
December	26.7	0.0	5.1	0.0	0.0	31.8
Total	401.1	6.5	85.7	8.0	25.1	526.4
% of Total	76.2	1.2	16.3	1.5	4.8	100.0
1985						
January	15.2	0.0	5.1	0.0	16.8	37.1
February	96.2	0.2	6.0	0.0	0.0	102.4
March	20.1	0.2	5.4	0.0	10.4	36.1
April	65.3	0.0	13.2	0.0	0.0	78.5

Source: Form FPC 4 and the Ohio Division of Energy

FIG. 3. MONTHLY OIL DELIVERIES TO POWER PLANTS IN OHIO

(JANUARY 1983 - APRIL 1985)



SOURCE: THE OHIO DIVISION OF ENERGY

Table 4. Major Ohio Utilities - Net Generation
by Types of Fuel (Ohio Portion)
(Thousand MWH)

1983	COAL	OIL	GAS	NUCLEAR	TOTAL
January	8219	-3	1	357	8574
February	7041	-1	0	560	7600
March	7055	1	1	647	7704
April	6716	8	1	574	7299
May	6630	4	-9	567	7192
June	7822	7	2	567	8398
July	9114	9	4	370	9497
August	10124	16	3	0	10143
September	9023	5	1	0	9029
October	9054	5	1	271	9331
November	8368	6	4	506	8884
December	10290	14	4	487	10795
Total	99456	71	13	4906	104446
% of Total	95.22	0.07	0.01	4.70	100.00
1984					
January	10503	9	4	249	10765
February	8608	2	0	596	9206
March	9344	4	2	111	9461
April	7000	4	1	579	7584
May	7771	3	1	546	8321
June	8632	6	1	556	9195
July	8316	16	1	586	8919
August	9122	6	1	569	9698
September	7771	3	1	152	7926
October	8690	3	1	0	8694
November	8196	15	1	0	8212
December	8344	7	1	0	8352
Total	102297	78	15	3944	106333
% of Total	96.20	0.07	0.01	3.71	100.00
1985					
January	10407	25	1	129	10562
February	8639	20	0	543	9203
March	8355	6	1	358	8719
April	8139	4	1	254	8398

Source: Form FPC 4 and the Ohio Division of Energy

FIG. 4. NET GENERATION BY TYPE OF FUEL
OHIO PORTION OF MAJOR OHIO ELECTRIC UTILITIES
(JANUARY 1983 - APRIL 1985)

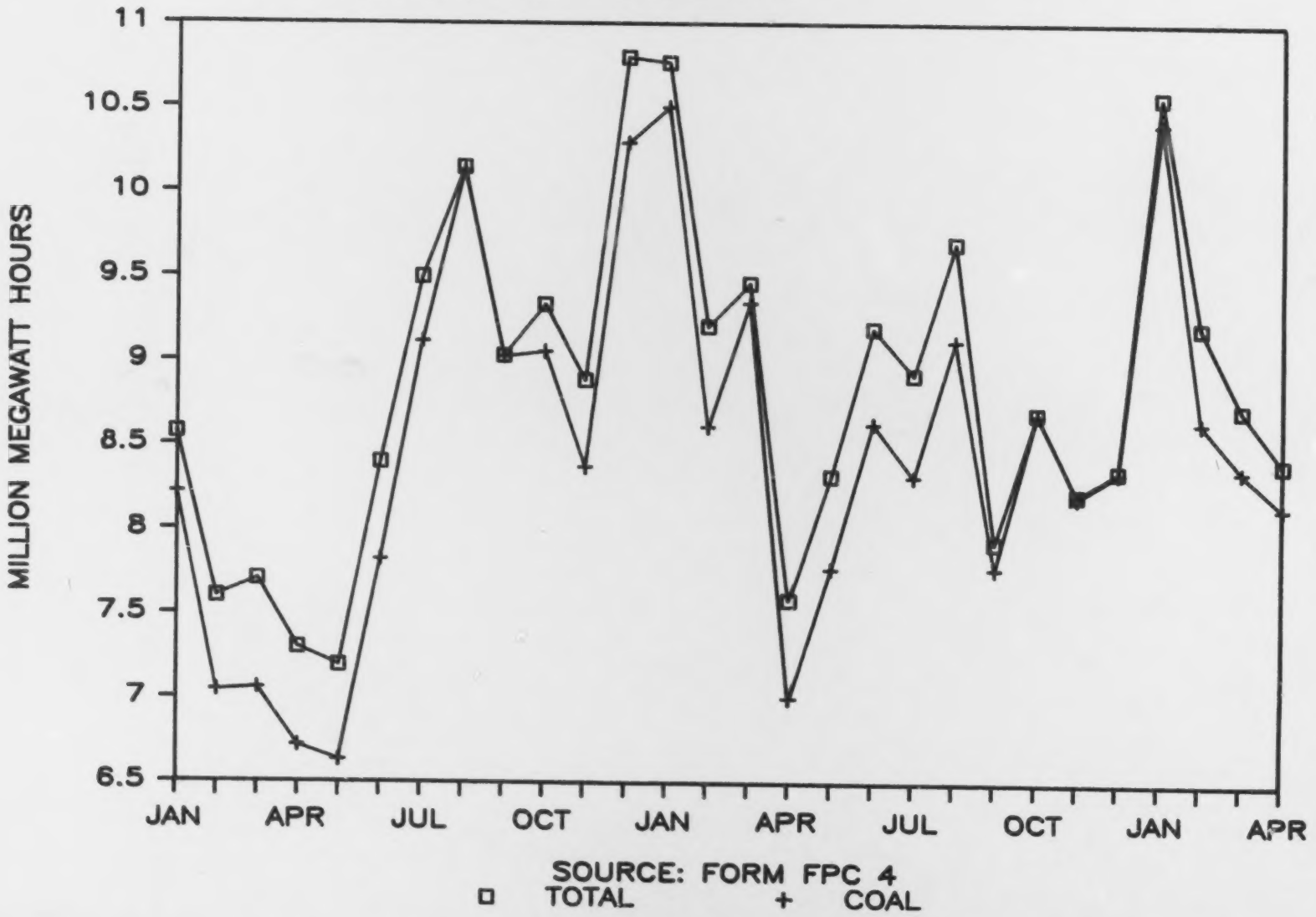


Table 5. Major Ohio Utilities
Fuel Consumption and Stocks
(Ohio Portion)

	Coal (Thousand Tons)		Oil (Thousand 42-Gal. Bbls.)		Gas (MMCF)
1983	Burned	In Stock	Burned	In Stock	Burned
January	3,582.2	9,807.8	51.1	1,470.5	45.5
February	3,068.6	9,694.0	43.5	1,468.1	17.0
March	3,076.2	9,378.9	39.7	1,468.5	42.5
April	2,920.4	9,649.2	48.8	624.9	39.6
May	2,851.0	10,308.8	52.9	410.6	25.6
June	3,347.7	10,363.6	45.3	386.0	68.6
July	3,953.3	9,440.7	57.7	378.4	86.5
August	4,416.1	9,038.8	64.0	365.0	76.5
September	3,902.5	8,567.9	38.2	324.8	22.8
October	3,934.2	8,458.8	41.0	385.0	33.0
November	3,623.0	8,502.4	48.9	408.6	75.8
December	4,561.6	7,487.1	75.3	326.3	81.8
Total	43,236.8	110,698.0	606.4	8,016.7	615.2
Avg/Month	3,603.1	9,224.8	50.5	668.1	51.3
1984					
January	4,635.1	6,913.0	58.3	396.7	76.0
February	3,756.3	7,364.0	54.3	390.5	14.0
March	4,113.5	7,793.7	16.6	397.7	56.1
April	3,031.9	8,583.7	41.5	409.7	44.7
May	3,362.8	9,761.1	44.3	449.5	35.3
June	3,726.9	10,164.8	42.9	450.7	53.2
July	3,667.3	10,541.4	42.0	441.3	37.8
August	3,951.9	11,400.6	47.0	418.7	14.8
September	3,273.7	12,393.2	36.9	410.6	18.7
October	3,733.3	11,725.0	43.9	442.4	21.5
November	3,120.7	11,379.0	71.3	738.3	179.5
December	3,598.3	10,954.3	45.5	410.0	21.0
Total	43,971.7	118,973.8	544.5	5,356.1	572.6
Avg/Month	3,664.3	9,914.5	45.4	446.3	47.7
1985					
January	4,476.5	9,962.9	115.0	360.7	47.0
February	3,704.5	9,652.1	78.0	353.6	23.9
March	3,611.2	10,038.0	58.9	342.2	29.7
April	3,475.2	9,951.7	34.3	383.1	34.9

Source: Form FPC 4 and the Ohio Division of Energy

Table 6. Ohio Electricity Consumption
June 1983 - May 1985
(Thousand MWH)

	June	July	August	September	October	November	December	January	February	March	April	May	Total
Residential													
1984-85	2190	2350	2466	2230	1976	2160	2715	3179	3250	2673	2329	1923	29440
1983-84	2024	2603	2818	2604	1936	2178	2727	3492	2891	2771	2448	2111	30602
% Change	8	-10	-12	-14	2	-1	0	-9	12	-4	-5	-9	-4
Commercial													
1984-85	1925	2013	2099	1945	1776	1777	1852	2019	2027	1885	1819	1839	22975
1983-84	1759	2047	2125	2060	1716	1678	1850	2048	1902	1889	1712	1702	22488
% Change	9	-2	-1	-6	4	6	0	-1	7	0	6	8	2
Industrial													
1984-85	3992	3809	3999	3860	3892	3776	3603	3794	3860	3930	3891	3925	46331
1983-84	3375	3281	3542	3616	3607	3554	3447	3708	3719	4020	3927	4006	43802
% Change	18	16	13	7	8	6	5	2	4	-2	-1	-2	6
Other													
1984-85	398	399	411	379	401	411	464	476	478	442	384	391	5033
1983-84	405	410	438	432	413	444	481	498	426	424	381	373	5123
% Change	-2	-3	-6	-12	-3	-7	-4	-4	12	4	1	5	-2
Total													
1984-85	8505	8571	8974	8414	8046	8124	8635	9468	9614	8930	8423	8078	103779
1983-84	7562	8341	8923	8713	7671	7854	8505	9745	8937	9105	8467	8192	102014
% Change	12	3	1	-3	5	3	2	-3	8	-2	-1	-1	2
Customers (1000's)													
Residential	3490	3487	3488	3490	3496	3504	3510	3513	3517	3518	3517	3515	
Commercial	357	358	358	358	359	358	358	361	363	363	364	365	
Industrial	26	26	26	26	26	26	27	27	27	27	27	27	
Total	3873	3870	3872	3874	3881	3889	3894	3901	3907	3908	3908	3907	

Source: The Ohio Electric Utility Institute: Monthly Summaries and ODOE Form SE-1

FIG. 5A. OHIO RESIDENTIAL SECTOR ELECTRICITY CONSUMPTION

(1983 - 1984 VS. 1984 - 1985)

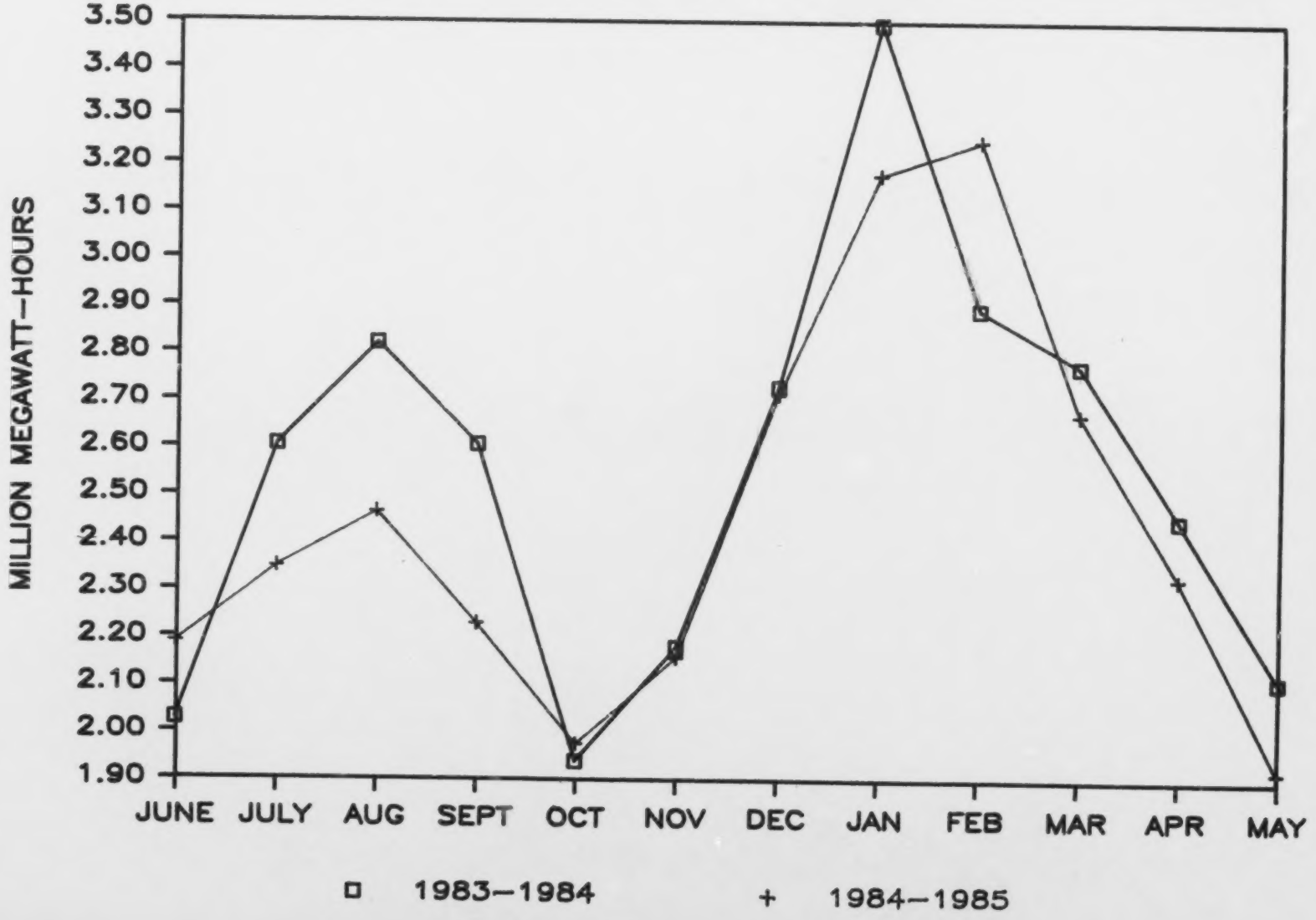


FIG. 5B. OHIO COMMERCIAL SECTOR ELECTRICITY CONSUMPTION
(1983 -1984 VS. 1984 - 1985)

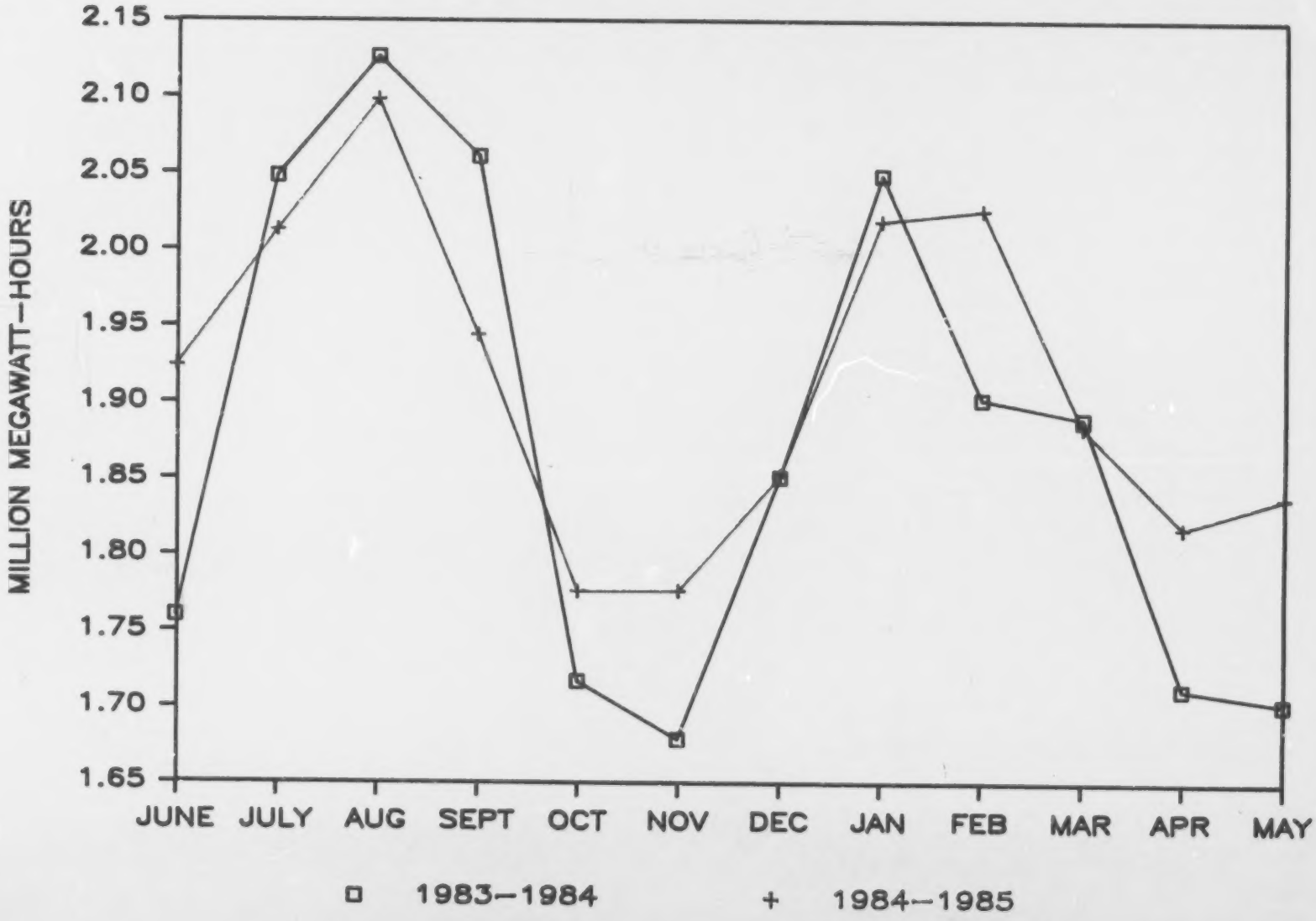


FIG. 5C. OHIO INDUSTRIAL SECTOR ELECTRICITY CONSUMPTION
(1983 - 1984 VS. 1984 - 1985)

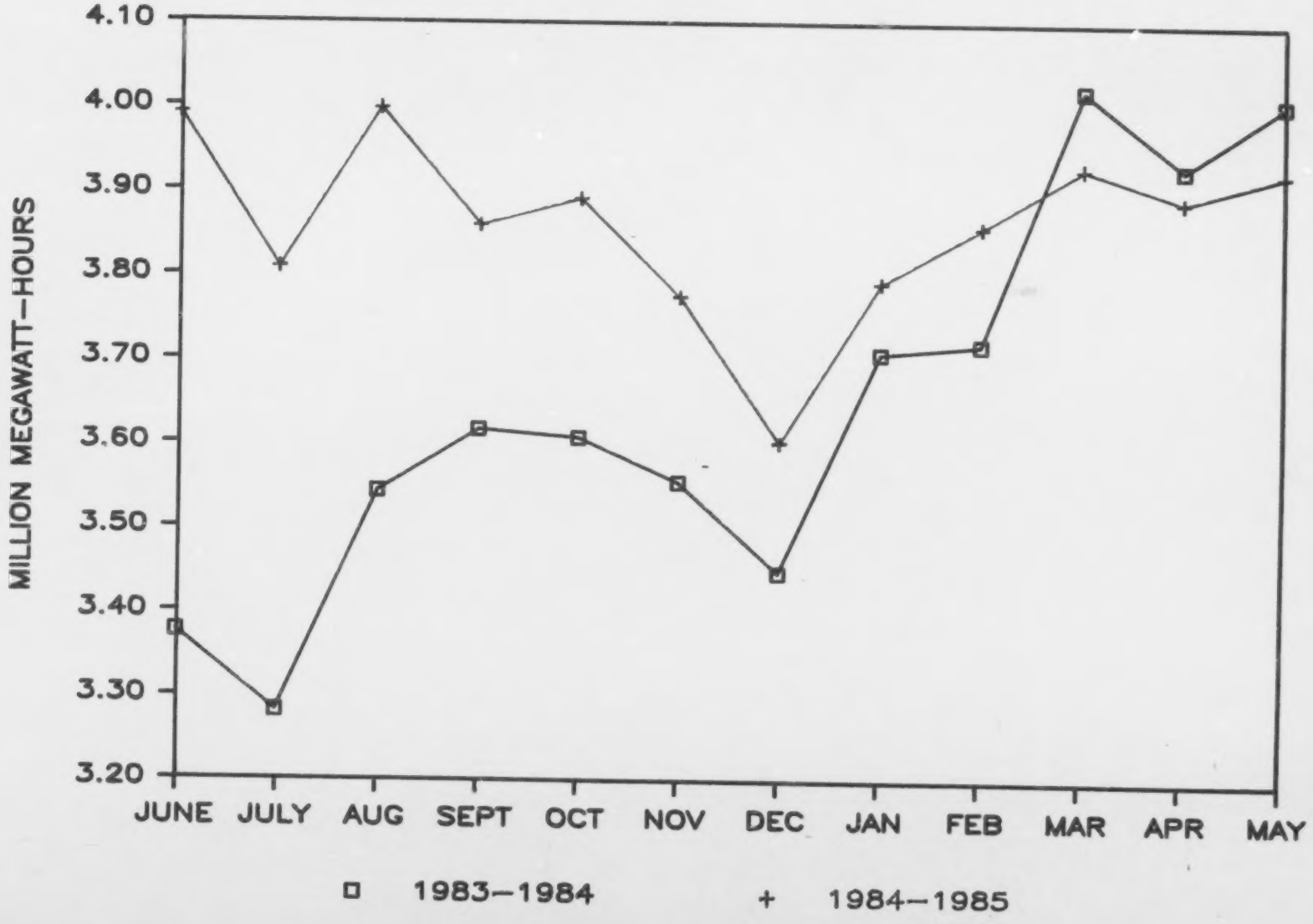


FIG. 5D. TOTAL ELECTRICITY CONSUMPTION
(1983-1984 VS. 1984-1985)

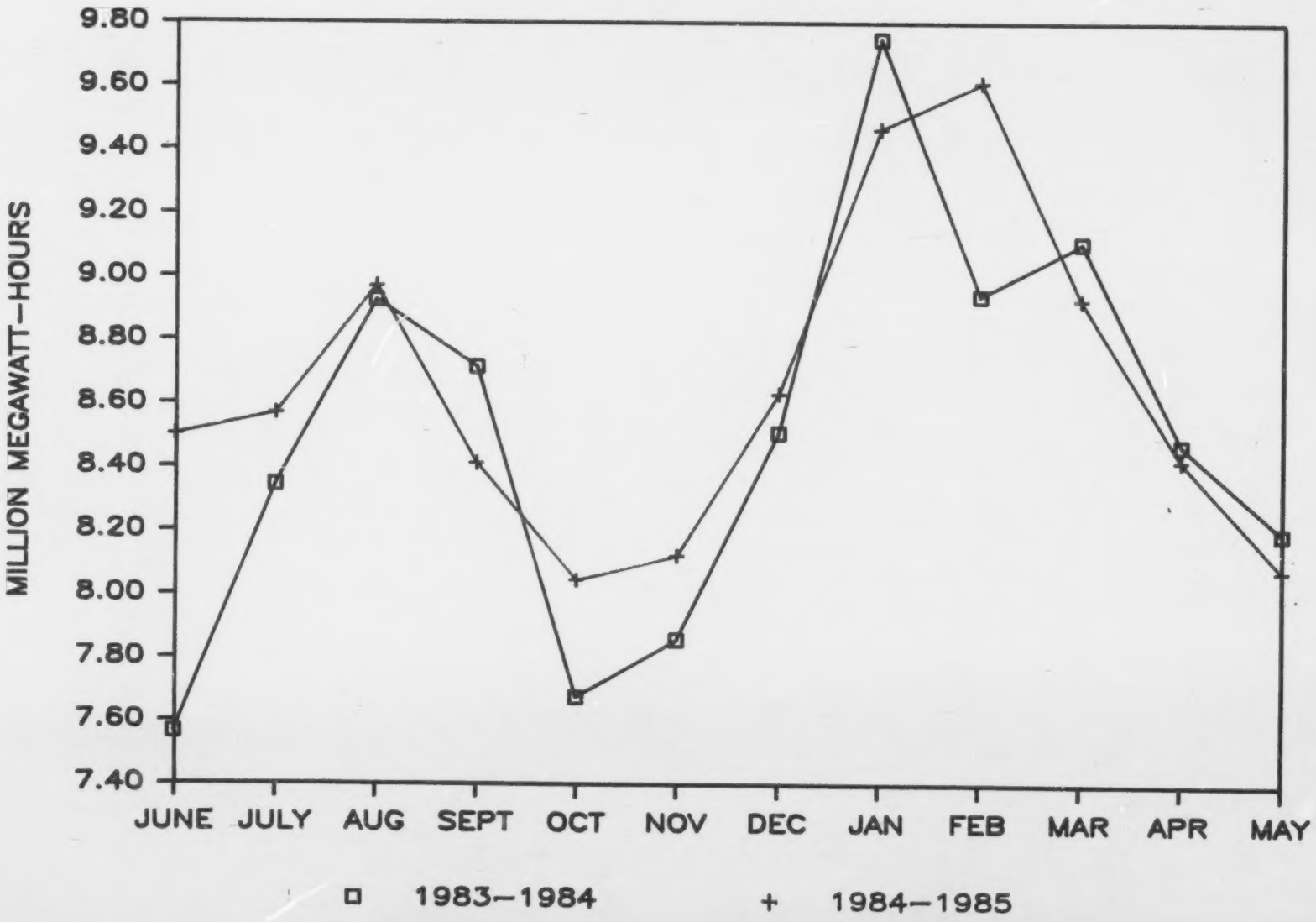


FIG. 5E. MONTHLY ELECTRICITY CONSUMPTION

(JANUARY 1974 - JUNE 1985)

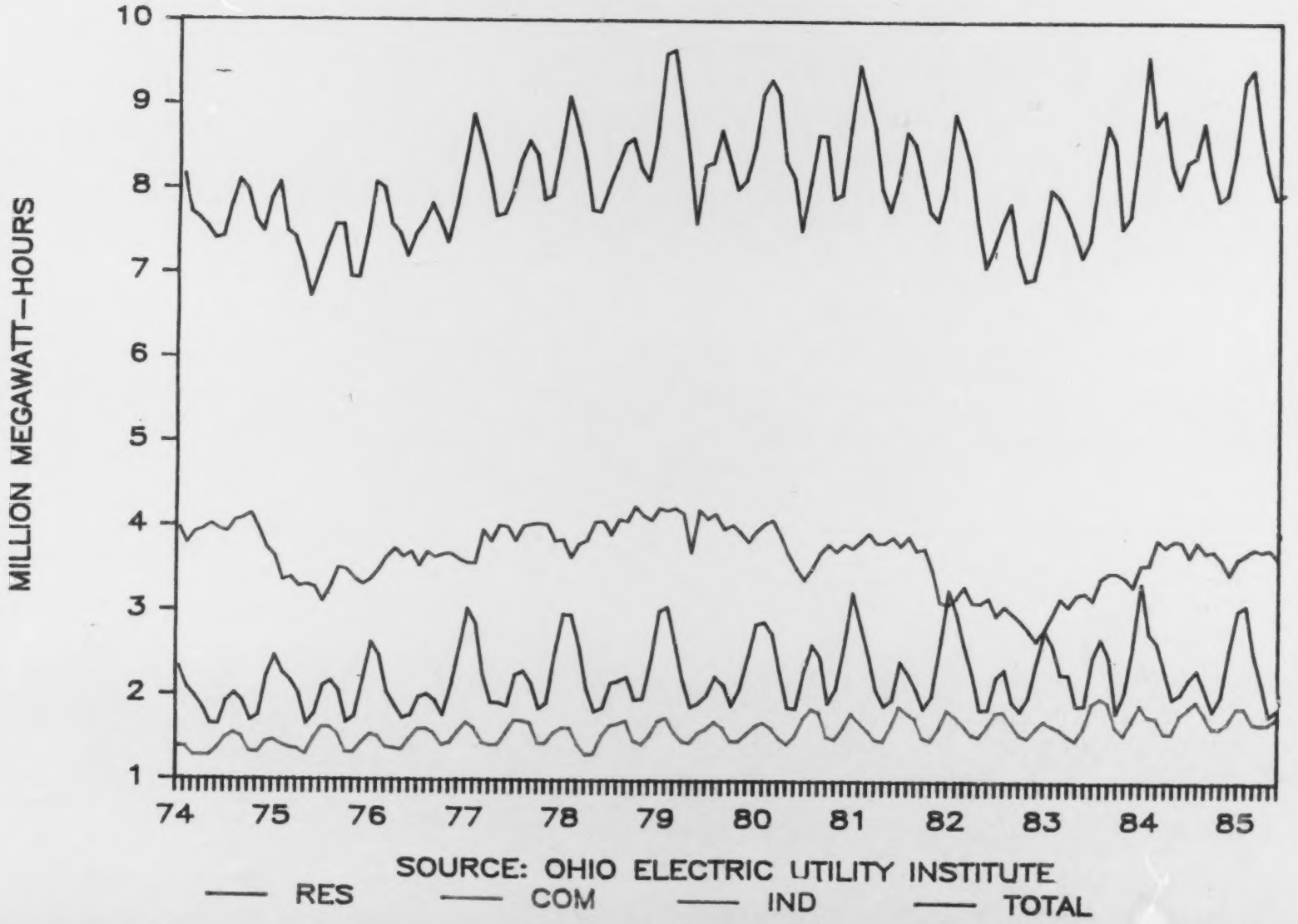


Table 7-A. Ohio Electric Utilities' Projected Deliveries, Consumption, and Stocks of Coal for Electricity Generation, 1984-1985, (1000 Short Tons)

	July	August	September	October	November	December	January	February	March	April	May	June	Total
Allegheny Power System													
Deliveries	1,234	1,308	1,329	1,368	1,314	1,318	1,460	1,452	1,452	1,477	1,478	1,478	16,664
Consumption	1,439	1,387	1,286	1,317	1,285	1,563	1,644	1,372	1,532	1,442	1,402	1,419	17,088
Stocks	2,850	2,770	2,813	2,863	2,892	2,646	2,462	2,542	2,462	2,496	2,572	2,631	
American Electric Power													
Deliveries	2,816	3,811	3,587	3,583	3,209	3,282	3,790	3,681	3,711	3,705	3,676	3,598	42,449
Consumption	3,707	3,574	3,123	3,070	3,228	3,971	4,336	3,833	3,647	3,160	2,954	3,274	41,877
Stocks	11,889	12,126	12,590	13,103	13,084	12,395	11,849	11,697	11,761	12,306	13,028	13,352	
Buckeye Power Inc.													
Deliveries	148	183	174	167	154	135	175	171	173	172	173	171	1,996
Consumption	128	187	148	134	174	204	209	147	147	185	141	136	1,940
Stocks	461	457	483	516	496	427	393	417	443	430	462	497	
Cincinnati Gas & Electric													
Deliveries	600	600	540	465	550	570	570	525	500	510	570	590	6,590
Consumption	597	607	540	463	545	560	575	524	504	508	570	587	6,580
Stocks	1,003	996	996	998	1,003	1,013	1,008	1,009	1,005	1,007	1,007	1,010	
Cleveland Electric Illuminating													
Deliveries	417	418	411	403	412	430	473	467	584	497	413	446	5,370
Consumption	503	485	441	403	412	430	473	467	584	497	413	446	5,353
Stocks	801	734	704	704	704	704	704	704	704	704	704	704	
Dayton Power and Light													
Deliveries	637	622	506	591	559	668	743	651	599	533	642	588	7,339
Consumption	640	622	506	591	559	668	711	651	599	532	642	588	7,310
Stocks	1,181	1,181	1,181	1,181	1,181	1,181	1,212	1,212	1,212	1,213	1,213	1,213	
Ohio Edison													
Deliveries	638	613	525	534	519	497	634	571	505	504	548	542	6,630
Consumption	654	613	525	534	519	497	634	571	505	504	548	542	6,647
Stocks	1,088	1,088	1,088	1,088	1,088	1,088	1,088	1,088	1,088	1,088	1,089	1,088	
Ohio Valley Electric Corp.													
Deliveries	626	631	565	576	572	599	587	528	585	568	590	564	6,991
Consumption	648	652	586	597	594	620	587	528	585	568	590	564	7,119
Stocks	1,344	1,322	1,301	1,280	1,258	1,237	1,237	1,237	1,237	1,237	1,237	1,237	
Toledo Edison													
Deliveries	119	118	108	96	92	94	113	113	127	144	143	108	1,375
Consumption	122	119	111	91	98	106	113	113	127	144	143	108	1,395
Stocks	308	307	304	309	303	291	291	291	291	291	291	291	

NOTE: NUMBERS MAY NOT SUM TO TOTAL DUE TO INDEPENDENT ROUNDING

Source: ODOE Form SE-3A.

Table 7-B. Ohio Electric Utilities' Projected Deliveries, Consumption, and Stocks of Oil for Electricity Consumption, 1984-1985.

	July	August	September	October	November	December	January	February	March	April	May	June	TOTAL
Allegheny Power System													
Deliveries	0	0	0	0	0	0	0	0	0	0	0	0	0
Consumption	0	0	0	0	0	0	0	0	0	0	0	0	0
Stocks	155,000	155,000	155,000	155,000	155,000	155,000	155,000	155,000	155,000	155,000	155,000	155,000	
American Electric Power System													
Deliveries	44,000	46,000	43,000	42,000	43,000	50,000	45,000	44,000	44,000	43,000	43,000	48,000	535,000
Consumption	44,000	46,000	43,000	42,000	43,000	50,000	45,000	44,000	44,000	43,000	43,000	48,000	535,000
Stocks	226,000	226,000	226,000	226,000	226,000	226,000	226,000	226,000	226,000	226,000	226,000	226,000	
Buckeye Power System													
Deliveries	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	24,000
Consumption	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	24,000
Stocks	8,000	8,000	8,000	8,000	8,000	8,000	8,000	8,000	8,000	8,000	8,000	8,000	
Cincinnati Gas and Electric													
Deliveries	10,000	10,000	0	0	10,000	10,000	10,000	0	10,000	10,000	0	10,000	80,000
Consumption	18,000	8,500	5,000	7,000	11,000	12,300	6,300	4,000	6,300	7,000	3,500	9,200	98,100
Stocks	73,000	74,500	69,500	62,500	61,500	59,200	62,900	58,900	62,600	65,600	62,100	62,900	
Cleveland Electric Illuminating													
Deliveries	9,938	21,483	13,826	15,124	517	698	3,274	1,150	6,019	5,586	1,826	3,879	83,320
Consumption	9,938	21,483	13,826	15,124	517	698	3,274	1,150	6,019	5,586	1,826	3,879	83,320
Stocks	175,738	175,738	175,738	175,738	175,738	175,738	175,738	175,738	175,738	175,738	175,738	175,738	
Dayton Power and Light													
Deliveries	1,095	1,095	4,119	1,167	31,833	1,095	1,095	1,095	14,571	30,286	643	1,095	89,189
Consumption	7,500	5,857	8,429	6,119	5,857	9,143	12,262	8,643	10,643	7,786	5,381	4,548	92,168
Stocks	400,167	395,405	391,095	386,143	412,119	404,071	392,904	385,356	389,284	411,784	407,046	403,593	
Ohio Edison													
Deliveries	2,055	1,177	0	0	0	1,523	0	698	698	0	0	0	6,151
Consumption	2,055	1,177	0	0	0	1,523	0	698	698	0	0	0	6,151
Stocks	34,836	34,836	34,836	34,836	34,836	34,836	34,836	34,836	34,836	34,836	34,836	34,836	
Ohio Valley Electric Corp.													
Deliveries	1,700	1,700	1,700	1,700	1,700	1,700	1,700	1,700	1,700	1,700	1,700	1,700	20,400
Consumption	1,700	1,700	1,700	1,700	1,700	1,700	1,700	1,700	1,700	1,700	1,700	1,700	20,400
Stocks	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000	
Toledo Edison													
Deliveries	976	905	690	0	548	714	1,262	1,500	976	905	833	1,000	10,310
Consumption	976	905	690	0	548	714	1,262	1,500	976	905	833	1,000	10,310
Stocks	8,371	8,371	8,371	8,371	8,371	8,371	8,371	8,371	8,371	8,371	8,371	8,371	

Source: ODOE Form SE-3A.

Note: Oil is expressed in 42 gallon barrels.

TABLE 7-C ELECTRIC UTILITIES' GENERATION FORECAST, FUEL ASSESSMENT AND INVENTORY MODEL

ALLEGHENY POWER SYSTEM

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
GENERATION FORECAST (GWH)	3642.	3507.	3257.	3325.	3249.	3977.	4197.	3493.	3911.	3679.	3571.	3633.	43441.
EST GENERATION BY COAL	3642.	3507.	3257.	3325.	3249.	3977.	4197.	3493.	3911.	3679.	3571.	3633.	43441.
PROJ DAILY CONSUMPTION COAL (KTONS)	45.	43.	42.	41.	42.	49.	52.	48.	48.	47.	44.	47.	
COAL DELIVERIES (KTONS)	1234.	1308.	1329.	1368.	1314.	1318.	1460.	1452.	1452.	1477.	1478.	1478.	16664.
END OF MONTH STOCK COAL (KTONS)	2890.	2851.	2928.	3019.	3085.	2875.	2723.	2834.	2784.	2848.	2955.	3038.	
NUMBER OF DAYS SUPPLY COAL	68.1	68.8	69.2	65.7	61.0	57.4	56.5	59.3	61.0	62.8	63.5	65.3	

AMERICAN ELECTRIC POWER SYSTEM

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
GENERATION FORECAST (GWH)	8741.	8383.	7308.	7271.	7666.	9402.	10286.	9093.	8799.	7468.	7137.	7651.	99205.
EST GENERATION BY COAL	8741.	8383.	7308.	7271.	7666.	9402.	10286.	9093.	8799.	7468.	7137.	7651.	99205.
PROJ DAILY CONSUMPTION COAL (KTONS)	121.	116.	105.	101.	110.	130.	143.	140.	122.	107.	99.	110.	
COAL DELIVERIES (KTONS)	2816.	3811.	3587.	3583.	3209.	3282.	3790.	3681.	3711.	3705.	3676.	3598.	42449.
END OF MONTH STOCK COAL (KTONS)	11843.	12050.	12494.	12951.	12863.	12102.	11469.	11241.	11168.	11662.	12269.	12577.	
NUMBER OF DAYS SUPPLY COAL	109.9	110.0	106.2	100.5	94.0	89.9	94.7	102.7	105.6	109.4	111.9	114.7	

TABLE 7-C ELECTRIC UTILITIES' GENERATION FORECAST, FUEL ASSESSMENT AND INVENTORY MODEL

CINCINNATI GAS & ELECTRIC

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
GENERATION FORECAST (GWH)	1333.	1342.	1183.	1114.	1178.	1253.	1275.	1149.	1125.	1125.	1256.	1296.	14630.
EST GENERATION BY COAL	1333.	1342.	1183.	1114.	1178.	1253.	1275.	1149.	1125.	1125.	1256.	1296.	14630.
PROJ DAILY CONSUMPTION COAL (KTONS)	19.	19.	17.	16.	17.	18.	18.	18.	16.	16.	18.	19.	
COAL DELIVERIES (KTONS)	600.	600.	540.	465.	550.	570.	570.	525.	500.	510.	570.	590	6590.
END OF MONTH STOCK COAL (KTONS)	1017.	1030.	1052.	1030.	1064.	1086.	1098.	1120.	1128.	1146.	1166.	1179.	
NUMBER OF DAYS SUPPLY COAL	55.9	62.4	63.8	59.1	59.7	60.6	65.3	68.7	65.6	62.5	61.7	62.9	

CLEVELAND ELECTRIC ILLUMINATING COMPANY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
GENERATION FORECAST (GWH)	1008.	917.	829.	768.	775.	828.	965.	952.	1174.	1007.	811.	894.	10929.
EST GENERATION BY COAL	1008.	917.	829.	768.	775.	828.	965.	952.	1174.	1007.	811.	894.	10929.
PROJ DAILY CONSUMPTION COAL (KTONS)	16.	15.	14.	12.	13.	13.	16.	17.	19.	17.	13.	15.	
COAL DELIVERIES (KTONS)	417.	418.	411.	403.	412.	430.	473.	467.	584.	497.	413.	445.	5369.
END OF MONTH STOCK COAL (KTONS)	800.	759.	756.	775.	800.	815.	805.	797.	794.	787.	794.	792.	
NUMBER OF DAYS SUPPLY COAL	55.7	57.8	59.8	59.0	55.8	50.6	45.4	43.5	52.2	56.6	53.3	53.1	

TABLE 7-C ELECTRIC UTILITIES' GENERATION FORECAST, FUEL ASSESSMENT AND INVENTORY MODEL

DAYTON POWER & LIGHT

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
GENERATION FORECAST (GWH)	1547.	1501.	1221.	1432.	1356.	1621.	1731.	1588.	1457.	1290.	1553.	1416.	17713.
EST GENERATION BY COAL	1547.	1501.	1221.	1432.	1356.	1621.	1731.	1588.	1457.	1290.	1553.	1416.	17713.
PROJ DAILY CONSUMPTION COAL (KTONS)	21.	20.	17.	19.	19.	22.	23.	23.	19.	18.	21.	20.	
COAL DELIVERIES (KTONS)	637.	622.	506.	591.	559.	668.	743.	651.	599.	533.	642.	588.	7339.
END OF MONTH STOCK COAL (KTONS)	1174.	1174.	1175.	1173.	1171.	1168.	1194.	1188.	1184.	1182.	1182.	1183.	
NUMBER OF DAYS SUPPLY COAL	63.5	65.1	62.0	58.3	52.6	50.2	55.6	63.4	61.3	58.6	60.5	60.6	

OHIO EDISON SYSTEM

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
GENERATION FORECAST (GWH)	1484.	1397.	1196.	1221.	1183.	1105.	1451.	1304.	1139.	1158.	1263.	1243.	15144.
EST GENERATION BY COAL	1484.	1397.	1196.	1221.	1183.	1105.	1451.	1304.	1139.	1158.	1263.	1243.	15144.
PROJ DAILY CONSUMPTION COAL (KTONS)	21.	20.	18.	17.	17.	16.	21.	20.	16.	17.	18.	18.	
COAL DELIVERIES (KTONS)	638.	613.	525.	534.	519.	497.	634.	571.	505.	504.	548.	542.	6630.
END OF MONTH STOCK COAL (KTONS)	1090.	1088.	1087.	1084.	1082.	1093.	1089.	1087.	1090.	1084.	1076.	1072.	
NUMBER OF DAYS SUPPLY COAL	58.1	62.4	62.9	64.7	60.0	53.2	59.8	65.3	62.4	60.0	59.0	58.8	

TABLE 7-C ELECTRIC UTILITIES' GENERATION FORECAST, FUEL ASSESSMENT AND INVENTORY MODEL

OHIO VALLEY ELECTRIC CORPORATION

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
GENERATION FORECAST (GWH)	1481.	1481.	1344.	1395.	1405.	1470.	1401.	1248.	1396.	1351.	1382.	1317.	16672.
EST GENERATION BY COAL	1481.	1481.	1344.	1395.	1405.	1470.	1401.	1248.	1396.	1351.	1382.	1317.	16672.
PROJ DAILY CONSUMPTION COAL (KTONS)	20.	20.	19.	19.	20.	20.	19.	19.	19.	19.	19.	19.	
COAL DELIVERIES (KTONS)	626.	631.	565.	576.	572.	599.	587.	528.	585.	568.	590.	564.	6991.
END OF MONTH STOCK COAL (KTONS)	1356.	1351.	1340.	1317.	1287.	1255.	1241.	1234.	1220.	1208.	1205.	1204.	
NUMBER OF DAYS SUPPLY COAL	68.5	69.8	67.8	65.3	64.9	65.1	64.5	63.9	63.5	63.6	64.0	63.9	

TOLEDO EDISON

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
GENERATION FORECAST (GWH)	590.	581.	551.	511.	511.	544.	562.	534.	549.	396.	409.	525.	6262.
EST GENERATION BY COAL	328.	318.	297.	247.	256.	279.	311.	307.	347.	396.	394.	285.	3766.
EST GENERATION BY NUC	263.	263.	254.	264.	255.	264.	251.	226.	202.	0.	16.	239.	2497.
PROJ DAILY CONSUMPTION COAL (KTONS)	4.	4.	4.	3.	3.	4.	4.	4.	4.	5.	5.	4.	
COAL DELIVERIES (KTONS)	119.	118.	108.	96.	92.	94.	113.	113.	127.	144.	143.	108.	1375.
END OF MONTH STOCK COAL (KTONS)	299.	290.	279.	276.	266.	248.	236.	226.	215.	200.	186.	180.	
NUMBER OF DAYS SUPPLY COAL	77.6	82.1	82.5	76.4	68.7	59.1	53.3	47.6	41.1	42.3	48.9	47.2	

III. NATURAL GAS

Natural gas distribution companies operating in Ohio are classified into two categories with respect to their reporting requirements. Eight major companies, Cincinnati Gas and Electric, Columbia Gas of Ohio, Dayton Power and Light, East Ohio Gas, National Gas and Oil, Ohio Gas, River Gas, and West Ohio Gas, report to ODOE every month. Eighteen small utilities and two municipal utilities report twice a year. This section is based upon the most recent reports of these utilities.

Distribution and Supplies

Distribution: Service shares of the gas distribution companies operating in Ohio are presented in Table 8 for the annual period May 1984 to April 1985. During this period, the four large distribution companies --Cincinnati Gas and Electric, Columbia Gas of Ohio, Dayton Power and Light, and East Ohio Gas-- jointly distributed 93.22 percent of the reported natural gas requirements of the state. The four intermediate sized companies --National Gas and Oil, Ohio Gas, River Gas, and West Ohio Gas-- distributed an additional 5.11 percent. The remaining 1.67 percent of the reported natural gas requirements were distributed by 18 small utilities and two municipal utilities. The figures presented in Table 8 do not include self-help natural gas, which is gas directly procured by industrial customers for their own use. Self-help and other gas marketing programs are discussed beginning on page 41 of this report. Total requirements of 767,083 MMCF reported in Table 8 represent a decrease of approximately 12.2 percent in the distribution of natural gas compared to the same period last year.

The behavior of monthly sectoral requirements between May 1984 and April 1985 versus the preceding annual period are comparatively presented

in figures 7-A through 7-D. Figure 7E is a comparison of the monthly requirements for each sector, from January 1970 to April 1985.

Sources of Supply: The major sources of natural gas supplies to the state of Ohio are presented in Table 9, and the quantities supplied are shown graphically in Figure 6. From May 1984 through April 1985, the eight major gas distribution companies of Ohio, which together account for 98.33 percent of the reported natural gas distribution in the state, procured 693,258 MMCF of natural gas to meet Ohio's requirements. This represents 12.6 percent decrease in the supplies of natural gas to Ohio compared to the same period in the previous twelve months.

Of the 693,258 MMCF total procurement, interstate gas purchases and synthetic natural gas (SNG) comprise 90.62 percent (See Table 9). Purchases of Ohio gas comprise the remaining 9.38 percent of the total. The 65,023 MMCF of Ohio production of natural gas purchased by the eight major gas utilities from May 1984 to April 1985 represents an 8.08 percent increase in their purchases of Ohio's product during the preceding annual period. This amount corresponds to approximately 34.87 percent of the state's total production of 86,480 MMCF in calendar year 1984. Most of the remainder of Ohio natural gas production is transported directly to industrial end users under the industrial self-help programs instituted by the PUCO in 1974.

Domestic interstate gas is the major source of supply for Ohio. Columbia Gas Transmission Corporation and Consolidated Gas Supply Corporation provided 63.14 percent of the natural gas supplied to the eight major Ohio gas distribution companies from May 1984 through April 1985.

Historical Behavior of Interstate Natural Gas Supplies: Until 1978, wellhead prices paid by interstate transmission companies to natural gas

producers were under federal control. Starting in the early seventies, and especially after the OPEC oil price increase of 1973, the federally-regulated gas supply prices for interstate commerce lagged behind the unregulated prices which the product commanded at the wellhead for intrastate commerce. Consequently, there were supply shortages in the interstate natural gas markets during the heating season, whereas producing states such as Texas and Louisiana experienced an overabundance of supplies at all times.

In Ohio, which is more than 90% dependent on interstate gas, a ban was imposed upon new customer hookups in 1972 which remained in effect until 1978. Similarly, base allocations of lower priority industrial and commercial customers were curtailed between 1973 and 1978.

The Natural Gas Policy Act (NGPA), which became effective in 1978, deregulated some gas prices immediately, and legislated a phased decontrol of prices for many categories of natural gas by 1985. Pursuant to the passage of the NGPA, relatively unfettered increases in interstate gas prices have stimulated new and more costly gas production from deep wells, thus increasing available supplies. The same price increases have also choked off sectoral requirements. There have been no curtailments in Ohio since 1978, and none are expected in the foreseeable future.

Historical Behavior of Sectoral Gas Requirements

Annual Sectoral Requirements: Long-term trends in annual natural gas prices and sectoral natural gas requirements for Ohio are presented in Figures B-5 thru B-8. It is clear from these figures that the dynamic behavior of natural gas markets in Ohio has been characterized by sharp increases in the price trends and spiralling declines in the requirement trends since 1973.

Dynamic behavior of relationships between two definitionally related time series, such as prices and sales, can be characterized by an identity transformation of the form: $S(t) = a_t P(t)$, where S(t) is the volume of sales at year t, P(t) is the avarage price of S(t), and a_t is the coefficient of tranformation which maps P(t) into S(t).

The coefficients of transformation of sectoral prices into sectoral sales have been declining at a faster rate than the rate of increase in sectoral prices, since 1973. This inverse relationship between the coefficients of transformation and increasing natural gas prices are visible by inspection in figures B-5 thru B-8.

Between 1970 and 1985, in response to a series of worldwide price shocks, including the OPEC oil price increases of 1973 and 1978, the price of natural gas in Ohio increased over sixfold in the residential and commercial sectors, and nearly ninefold in the industrial sector (See Table 10). Until 1984, these price increases far exceeded the increase in the rate of inflation (See Table 11), or the rate of increase of the gross state product. Such significant and sustained increases in sectoral prices induced significant and sustained conservation efforts among sectoral customers, which in turn translated into declining sectoral requirement trends.

In recent years industrial non-tariff sales, such as self-help procurements, have come to account for an ever increasing share of the total industrial requirement in Ohio. This is due to the fact that non-tariff sales prices are determined in the spot market and are lower than the regulated prices for industrial tariff sales. The latter category of sales has to reflect fully the fixed and variable costs of gas procurement and distribution, including take or pay contract costs, and distribution company revenue requirements.

It should be noted, however, that the declining trends in total industrial sector requirements represent not only the net outcomes of price induced energy conservation and fuel switching programs, but also a permanent loss in industrial capacity, especially in the older and more energy intensive manufacturing industries of the state's economy.

Monthly Sectoral Requirements: The monthly time series behavior of residential, commercial, industrial, and total natural gas requirements in Ohio from January 1974 through May 1985, along with the Division's independent forecasts for July 1985 through June 1986 are displayed in figures B-1 through B-4. The seasonal variations in residential and commercial requirements can easily be discerned from these figures. Natural gas is the primary source of space heating in Ohio. Demand peaks in all sectors during the heating season and falls off during the cooling season. The dramatic effects of the curtailments imposed on the industrial sector during the 1976-77 heating season is clearly discernable in figure B-3.

Utility Forecasts: Consolidated Results and Twelve Month Outlook

Consolidated Results: Aggregate supply and demand projections of the eight major utilities, as presented in Table 12 and Figure 8, indicate a 0.05 percent annual surplus of natural gas supplies over requirements. All eight utilities project supply to be approximately equal to requirements, during the 1985-86 heating season. Supply and demand projections of the individual utilities, as submitted in their "Monthly Reports of Supply and Demand of Natural Gas," are summarized in Appendix B, Table B-9.

Table 13 shows the actual aggregate monthly sectoral requirements for the eight major utilities from May 1984 through April 1985 along with the utilities' consolidated projections for the May 1985 through April 1986

period. The forecast shows decreases in demand in the three major sectors. Figure 9 is a graphic representation of the utilities' consolidated sectoral projections for the forecast period. Overall, the forecast total annual gas requirement shows an decrease of 22.5 percent relative to the same twelve month period last year.

Actual and forecast aggregate supply of natural gas by source is displayed in Table 14. Delivered product from all pipeline sources is expected to decrease 22.5 percent over the previous twelve month period. The majority of this supply, roughly 90 percent, will continue to come from out-of-state sources. Columbia Gas Transmission Corporation, the largest supplier to the state, is projected to supply 39.2 percent of natural gas demand.

Twelve Month Outlook: On the basis of the utilities' natural gas supply and sectoral requirement projections, the outlook for the next twelve months indicates no supply shortages, under both normal and 10 percent colder than normal weather conditions, in Ohio.

The Ohio Division of Energy will be monitoring developments in the supplies and requirements of natural gas throughout the rest of the year and will take appropriate action if a critical situation develops. However, Ohio Division of Energy's current conclusion is that prevailing conditions portend no shortages or curtailments of natural gas during the 1985-86 heating season.

Ohio Division of Energy Independent Forecast

Methodology

The independent natural gas demand forecasts prepared by Ohio Division of Energy for the eight major gas utilities serving Ohio are based upon

time series analyses of sectoral requirements for each individual month of the year, between January 1970 and May 1985, adjusted for long-term annual trends, severe climatic conditions, and the business cycle.

Time series models, with adjustments, yield projections that possess better statistical properties, and are at least as accurate as alternative short-term forecasting techniques. They also offer the added flexibility of being able to produce updated forecasts which reflect and incorporate specific assumptions pertaining to the prevailing climatic and economic conditions every time the most recent actual monthly requirements are reported to The Ohio Division of Energy. The utilization of an adjusted time series methodology is designed to provide a double check, thus reducing forecasting error for a more accurate and decisive diagnosis of energy requirements of the state.

Special Assumptions

We expect economic recovery to stabilize throughout the forecasting horizon, with the unemployment rate fluctuating between 8.0 to 9.5 percent. Inflation is expected to remain below 3 percent, and the trend in natural gas prices will remain around 1983 levels. The final deregulation of natural gas prices under NGPA, which went into effect in January 1985, will not significantly influence market clearing prices under the prevailing demand conditions.

Results

The results obtained on the basis of ODOE's independent forecast of sectoral requirements and the utilities' forecasts of supplies are presented in Tables 15 and 17-20, for the 1985-86 heating season. Summary results presented in Table 15 indicate a potential deficiency of 2.7 percent in the case of a 10 percent colder than normal winter. Given the

availability of interstate gas supplies, the spot market, the contractual agreements the gas utilities have with their gas suppliers, and the current storage capacities of Ohio utilities, no actual deficiencies or curtailments are expected.

ODOE's independent forecasts for the four major utilities are compared with each company's forecast for the period from July 1985 through June 1986 in Appendix B, Tables B-1 through B-4. The Division's forecasts of sectoral end-use gas requirements for Ohio are presented in Appendix B, Tables B-5 through B-8. These have been adjusted for the long-term historical trends observed in sectoral natural gas requirements in the state. Finally, for comparison, Appendix B, Table B-9 displays twelve-month forecasts, produced monthly by each utility and reported to the Ohio Division of Energy.

A word of explanation is in order, in view of the ten percent deficiency predicted for Columbia Gas of Ohio service area in Table 18. The deficiency in question arises in comparing ODOE independent service area demand projections with CGO's supply projections. CGO's supply projection's do not reflect the limits of their ability to procure natural gas supplies for Ohio. They simply reflect the levels of procurement that would be consistent with CGO's assessment of the demand for their product during the forth coming heating season. Clearly, CGO's assessments of their business prospects are a lot bleaker than that of our assessments of their prospects for the next heating season.

The ODOE independent demand forecast is based upon weighted extrapolations of recent historical trends. Since the historical trends in residential and commercial requirements have been relatively stable, the discrepancy between CGO and ODOE forecasts must arise with respect to

differences in assumptions or information utilized in makeing industrial projections. In particular it must reflect differences with respect to information or assumptions pertaining to the increase in the volume of requirements that would switch to non-tariff procurement.

The important point to be emphasized is that even if the demand for natural gas in CGO service area is actually ten percent higher than what they have projected, there would be no problems involved in finding supplies to meet the higher levels of demand. An over abundance of natural gas supplies, tied to take or pay contracts, flood the interstate natural gas markets in general, and Columbia Gas Transmission System, which is the major supplier of Columbia Gas of Ohio, in particular, at this time.

Outlook

Any unexpected changes in the short-term behavior of residential and commercial requirements would mainly be associated with variations in the severity of the heating season and alterations in the long-term trends followed by natural gas prices. Given conservation efforts and the growing surplus of natural gas supplies, dramatic changes in the long-term trends followed by residential and commercial natural gas requirements and prices are not anticipated in the near future.

In recent years, the industrial sales of natural gas by utilities have decreased substantially. Part of this has been due to conservation, fuel switching and declining industrial activity in the basic industries. An increasing portion of this decline has also been the result of self-help programs administered by the PUCO and fuel oil displacement and special marketing programs administered by the Federal Energy Regulatory Commission (FERC).

The State of Ohio initiated a self-help program in 1974 to assist industrial consumers whose tariff supplies of natural gas were threatcned with curtailment. The program permits industrial concerns to purchase their own gas at the wellhead and have it transported directly to their location by a gas distribution company. Throughout the mid and late 1970s, industrial consumers paid unregulated prices to producers and contracted for delivery with the gas distribution companies, which charged a fee for transmission and were permitted receipt of up to 25% of the gas for their own customers. In April 1983, as a result of surplus of natural gas, the Public Utilities Commission of Ohio amended the self-help rules to rescind distribution company privileges to acquire ownership shares of self-help gas.

The rapid rise in natural gas prices has replaced potential curtailment as the incentive for Ohio industry's participation in the state's self-help program. In 1983, 20% of industrial gas requirements were met with self-help gas deliveries.

Self-help gas has emerged as a resource vital to the economic development of Ohio. Its cost advantage improves the competitive positions of participating industries. Also, self-help gas provides an additional market for Ohio gas producers and spurs competition in wellhead and burnertip prices.

Federally regulated marketing programs became significant in 1983 and have added to the loss of customers mainly in industrial tariffs. Fuel oil displacement and special marketing programs regulated by FERC, and Ohio self-help accounted for 34.46 percent of Ohio industrial gas use in 1984.

The effective price discrimination between customer categories which is introduced into the gas market through special marketing programs should

help Ohio's industry by making it possible for firms to take advantage of available input cost minimization opportunities. However, it also implies that a greater proportion of fixed costs involved in the procurement and distribution of natural gas will have to be born by industrial tariff customers, whose ranks may virtually disappear in the next decade if present trends continue. These fixed costs will also be passed on to the residential and commercial customers for whom the information, and contract costs involved in seeking non-tariff purchases, or minimum volume requirements may simply be prohibitive. The development of non-tariff industrial sales in Ohio is documented in Table 16-A.

Emergency Response Capability Profile

There have been no natural gas curtailments in Ohio since 1978, and neither Ohio gas utilities nor the gas pipeline companies project any curtailments through June 1986. However, in the event of a shortage, it is anticipated that fuel-switching capability of industrial and large commercial users would be accelerated. Detailed emergency plans that describe strategies to respond to fuel supply shortfalls are on file at the Ohio Division of Energy.

Table 8: Total Natural Gas Requirements of All Commercial Utilities in Ohio, May 1984 through April 1985

	(1) Sales to All End Users	(2) Storage (In)	Total Requirement (1+2)	Percent of Total Ohio Requirement
Cincinnati Gas and Electric Co.	70567	0	70567	9.20
Columbia Gas of Ohio	219795	0	219795	28.65
Dayton Power and Light Co.	51627	0	51627	6.73
East Ohio Gas Co.	313651	59428	373079	48.64
National Gas and Oil Co.	15579	1488	17067	2.22
Ohio Gas Co.	6693	82	6775	0.88
River Gas Co.	4214	0	4214	0.55
West Ohio Gas Co.	11132	0	11132	1.45
Total Eight Major Utilities	693258	60998	754256	98.33
Total Small Utilities	6441	0	6441	0.84
Municipal Utilities	6386	0	6386	0.83
TOTAL ALL UTILITIES	706085	60998	767083	100.00

Source: CDOE Form SG-2 and SG-4.

Table 9: Sources of Natural Gas Supplies to the Eight Major Gas Utilities, May 1984 through April 1985

	Supply	Percent of Total	Rank
Columbia Gas Transmission Corp.	271684	39.19	1
Consolidated Gas Supply Corp.	166012	23.95	2
Lawrenceburg Gas	5888	0.85	9
Michigan/Wisconsin Pipeline Co.	3394	0.49	10
Panhandle Eastern Pipeline Co.	50909	7.34	5
Tennessee Gas Pipeline Co.	1511	0.22	11
Texas Eastern Transmission Corp.	7390	1.07	8
Texas Gas Transmission Corp.	270	0.04	12
Green Springs (SNG) (Columbia LNG)	13104	1.89	7
Storage/Propane [1]	63559	9.17	4
Other	44514	6.42	6
Total SNG and Out-of-State	628235	90.62	
Ohio Product	65023	9.38	3
TOTAL	693258	100.00	

[1] Note: Gas in storage represents a source during the period under consideration. Figure is elevated because Cincinnati Gas and Electric maintains propane in storage for peak-sharing.

Source: Ohio Division of Energy Form SG-2

FIG. 6. SOURCES OF NATURAL GAS SUPPLY
FOR THE EIGHT MAJOR GAS UTILITIES
(MAY 1984 - APRIL 1985)

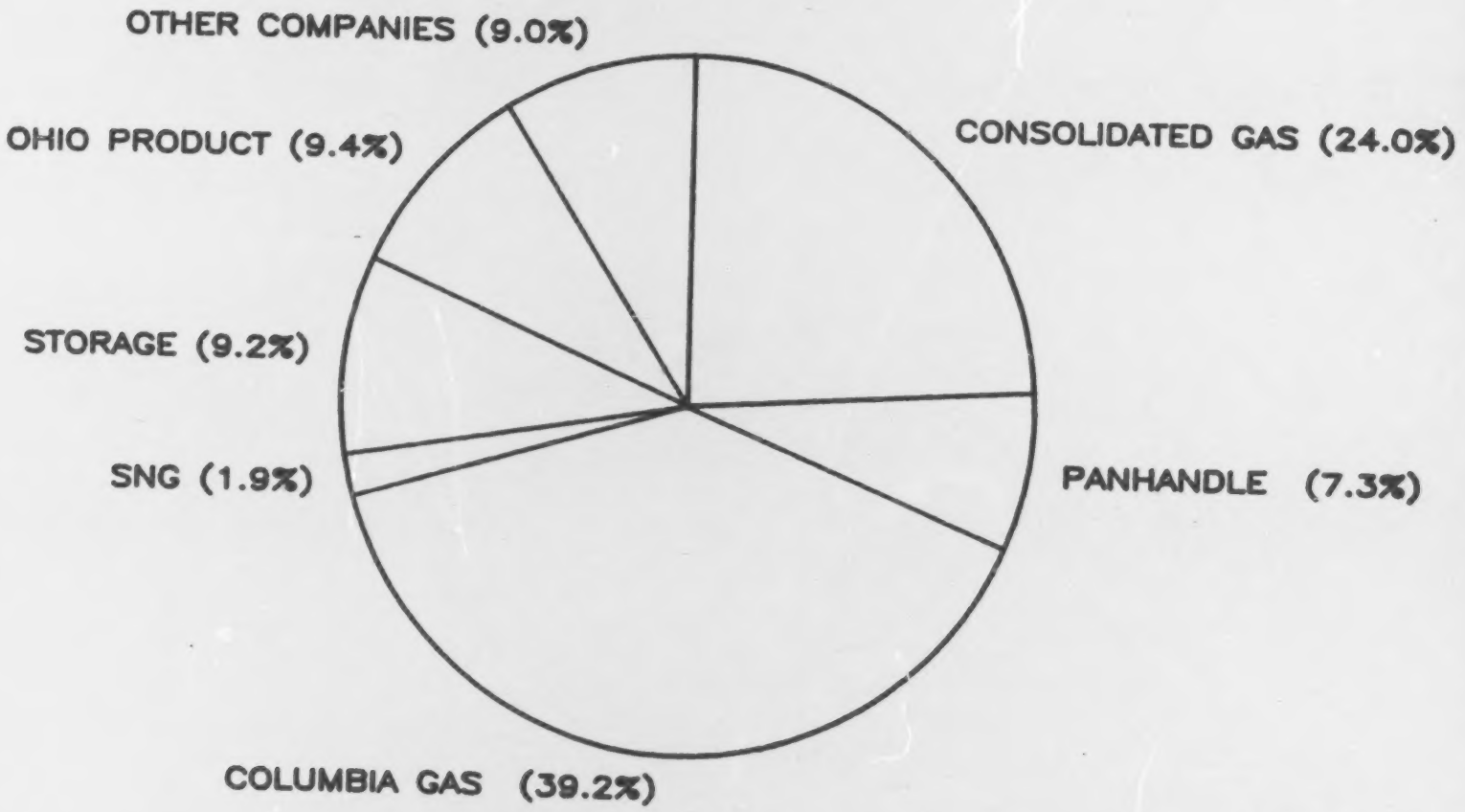


Table 10: Ohio Natural Gas Prices in Current Dollars, 1970-1984
($ Per MMBtu)

Year	Residential	Commercial	Industrial
1970	0.84	0.73	0.52
1971	0.96	0.81	0.56
1972	1.02	0.86	0.62
1973	1.08	0.94	0.65
1974	1.23	1.07	0.85
1975	1.51	1.35	1.12
1976	1.79	1.63	1.43
1977	2.23	2.07	1.95
1978	2.43	2.24	2.05
1979	2.78	2.57	2.32
1980	3.45	3.23	2.97
1981	3.87	3.61	3.34
1982	4.80	4.53	4.20
1983	5.88	5.40	5.01
1984	5.44	5.22	4.44

Source: American Gas Association, Gas Facts, and the Ohio Division of Energy.

Table 11: Ohio Natural Gas Prices in Constant Dollars, 1970-1984
($ Per MMBtu)

Year	Residential	Commercial	Industrial
1970	0.72	0.63	0.45
1971	0.78	0.67	0.47
1972	0.81	0.69	0.49
1973	0.81	0.71	0.46
1974	0.83	0.72	0.58
1975	0.94	0.84	0.69
1976	1.05	0.96	0.84
1977	1.23	1.14	1.07
1978	1.24	1.15	1.05
1979	1.28	1.18	1.07
1980	1.40	1.31	1.20
1981	1.42	1.34	1.25
1982	1.66	1.57	1.45
1983	1.84	1.69	1.57
1984	1.75	1.67	1.42

Note: All prices are stated in terms of 1967 dollars.

Source: American Gas Association,Gas Facts, 1983, U.S. Department of Commerce, "Survey of Current Business", April 1982, and the Ohio Division of Energy.

FIG. 7-A. OHIO RESIDENTIAL SECTOR NATURAL GAS CONSUMPTION

1983 - 1984 VS. 1984 - 1985

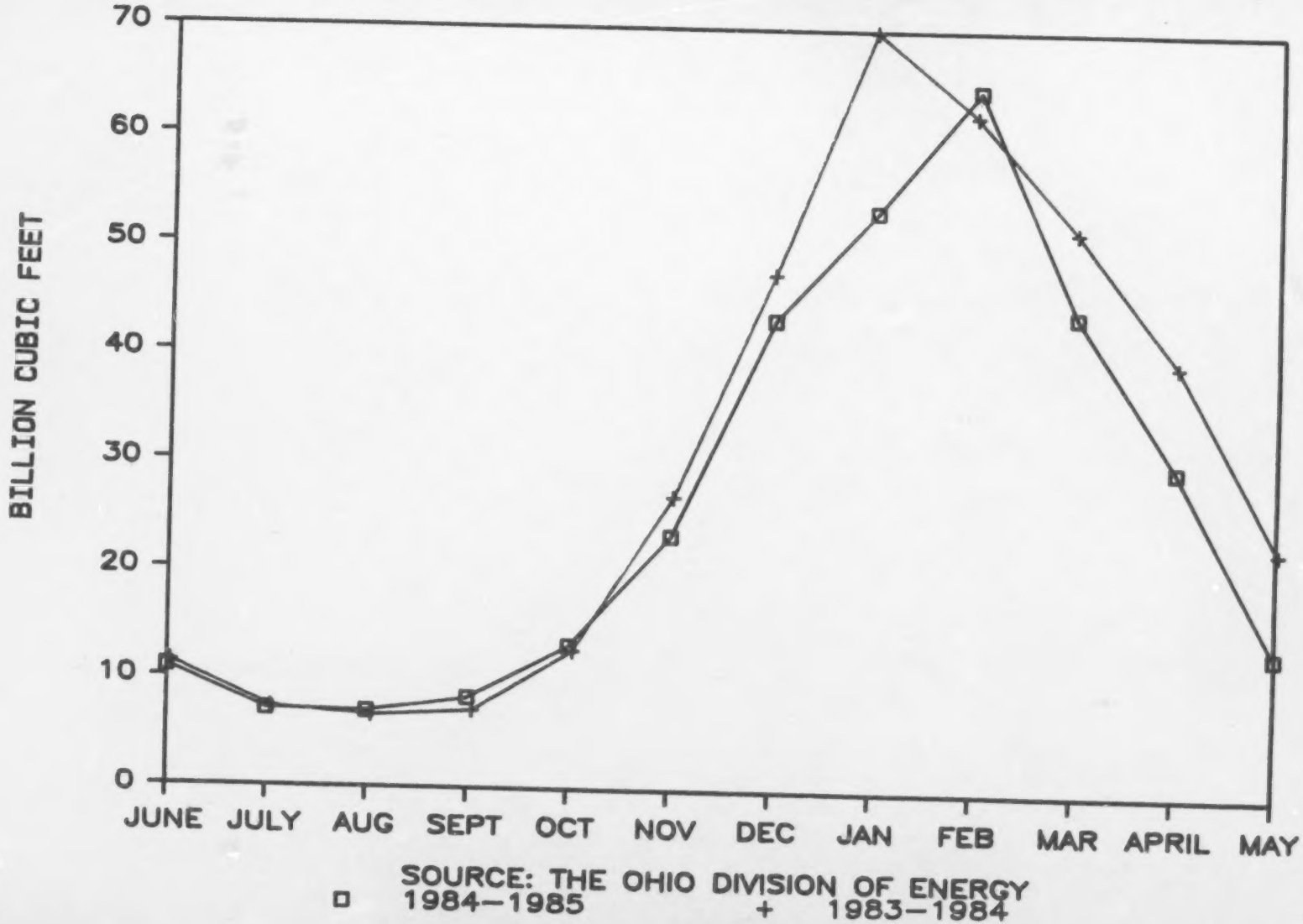


FIG. 7-B. OHIO COMMERCIAL SECTOR NATURAL GAS CONSUMPTION

1983 - 1984 VS. 1984 - 1985

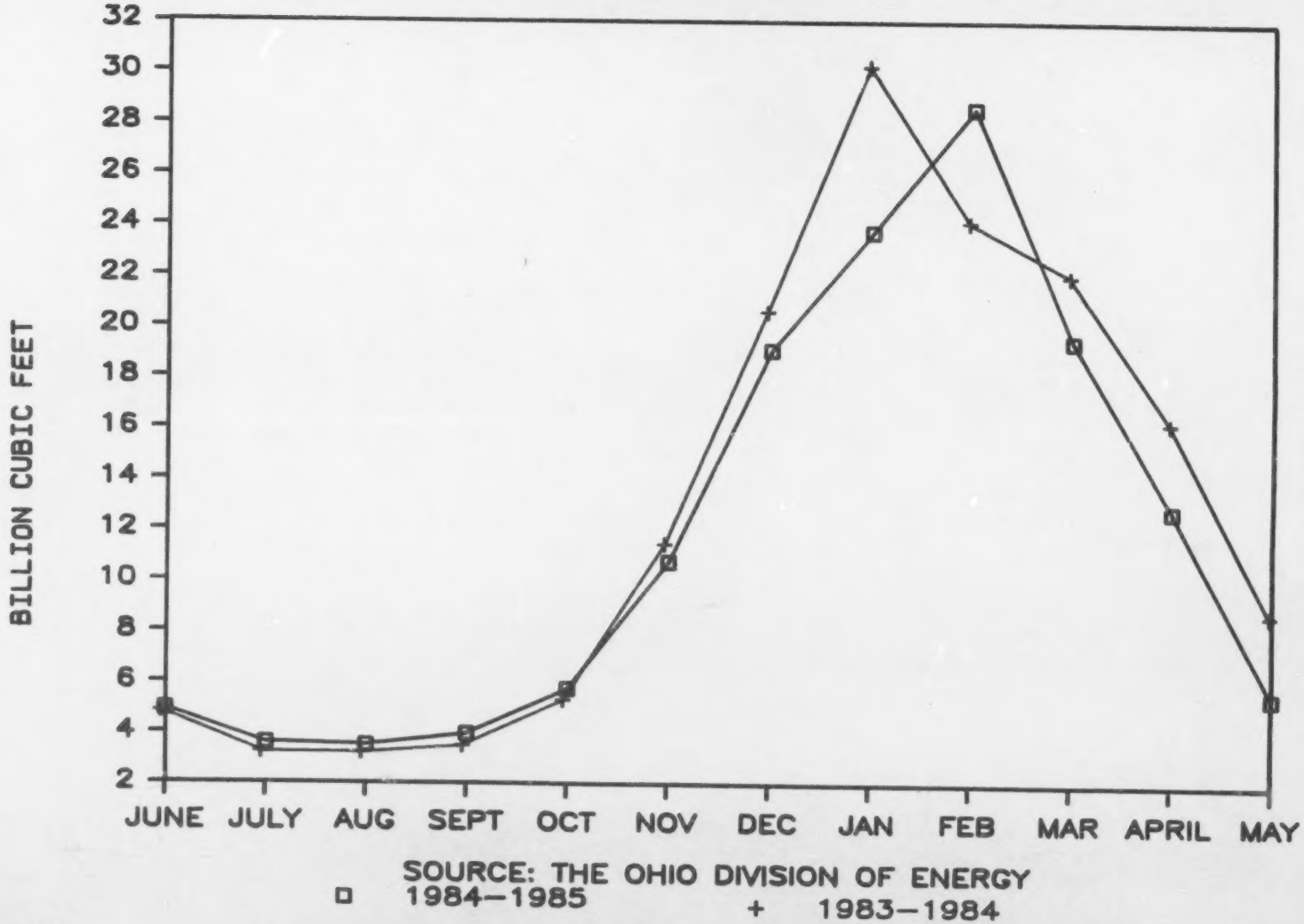


FIG. 7-C. OHIO INDUSTRIAL SECTOR NATURAL GAS CONSUMPTION

1983 - 1984 VS. 1984 - 1985

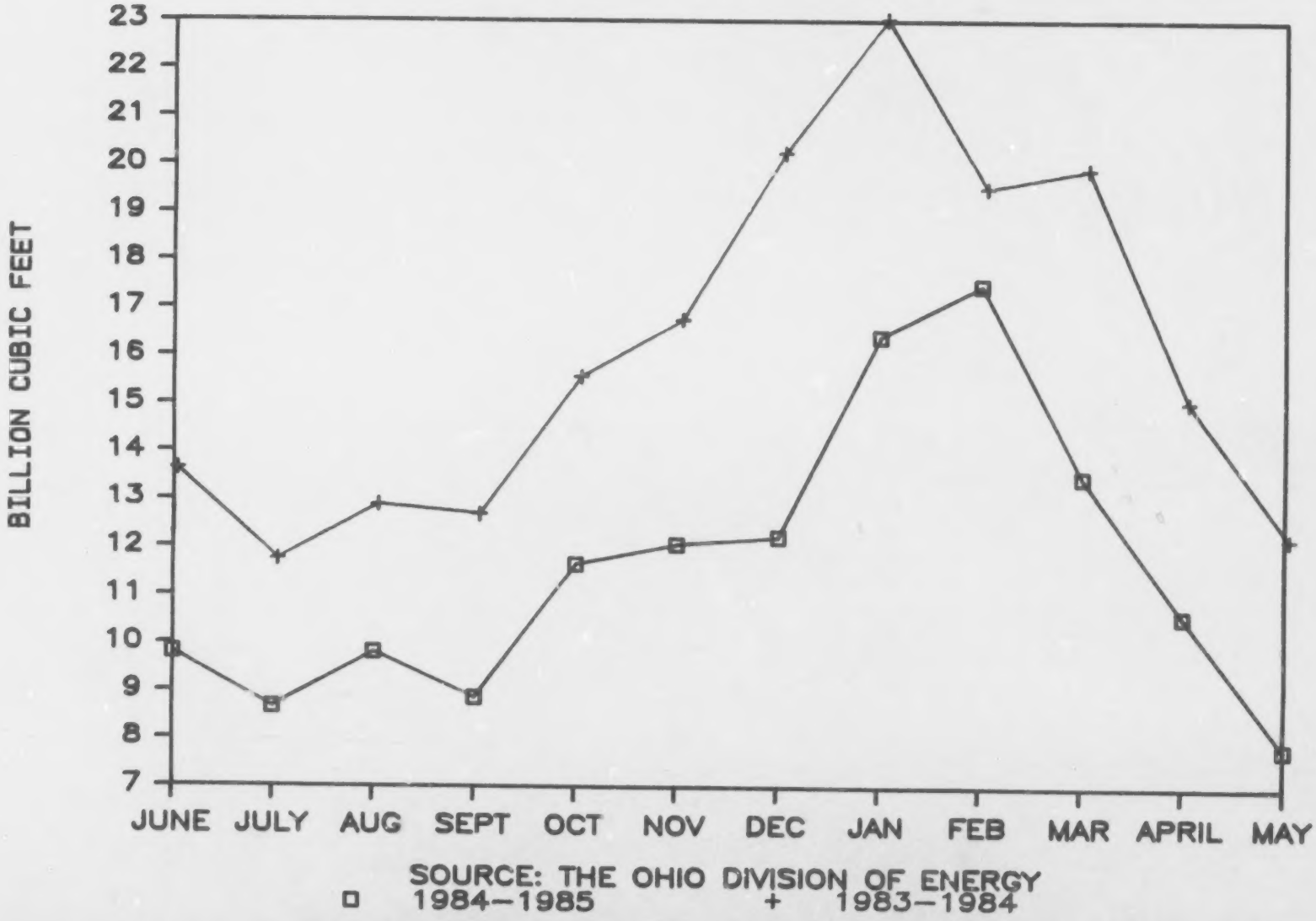


FIG. 7-D. TOTAL OHIO NATURAL GAS CONSUMPTION
1983 - 1984 VS. 1984 - 1985

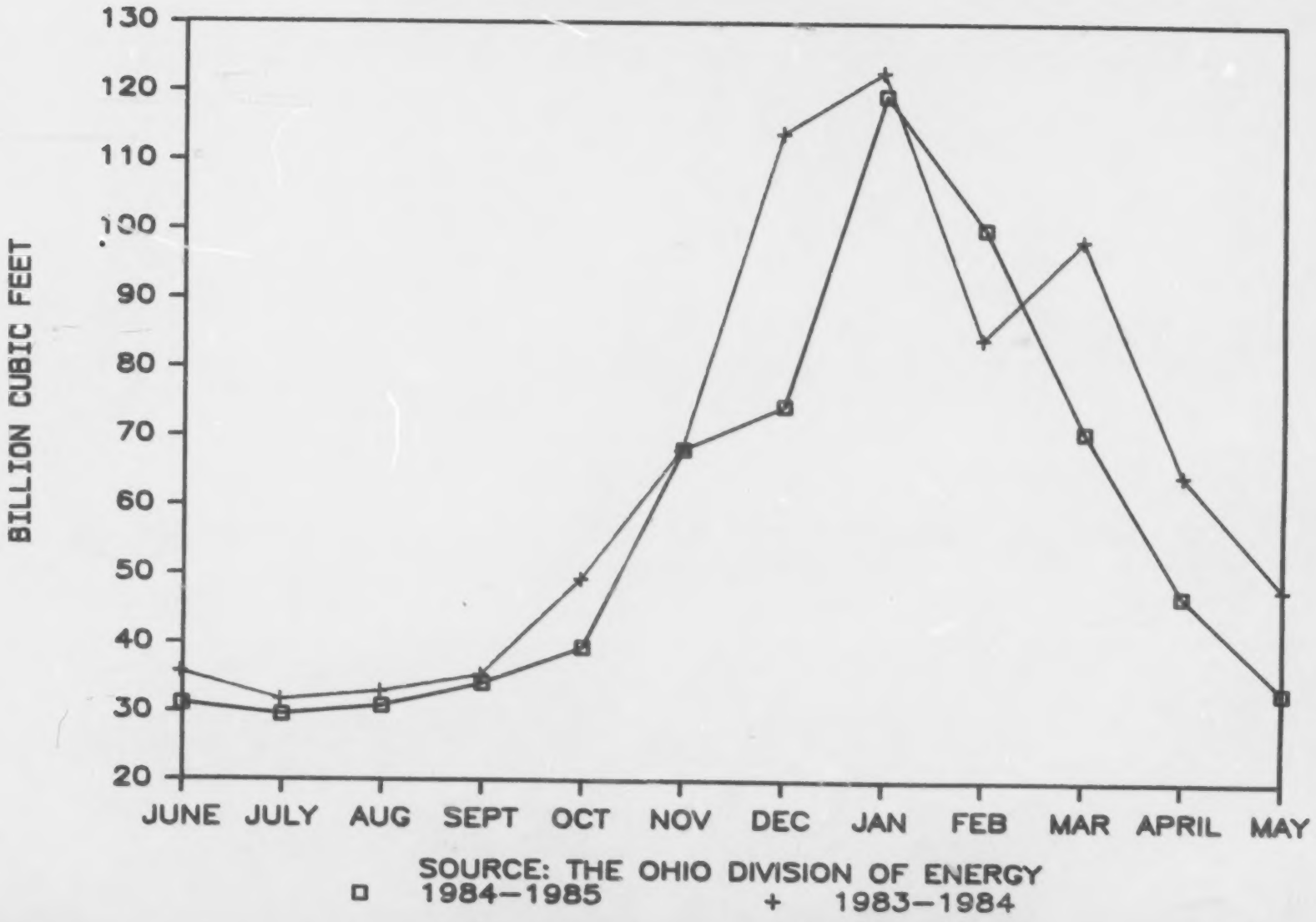


FIG. 7E. MONTHLY GAS CONSUMPTION

(JANUARY 1970 - MAY 1985)

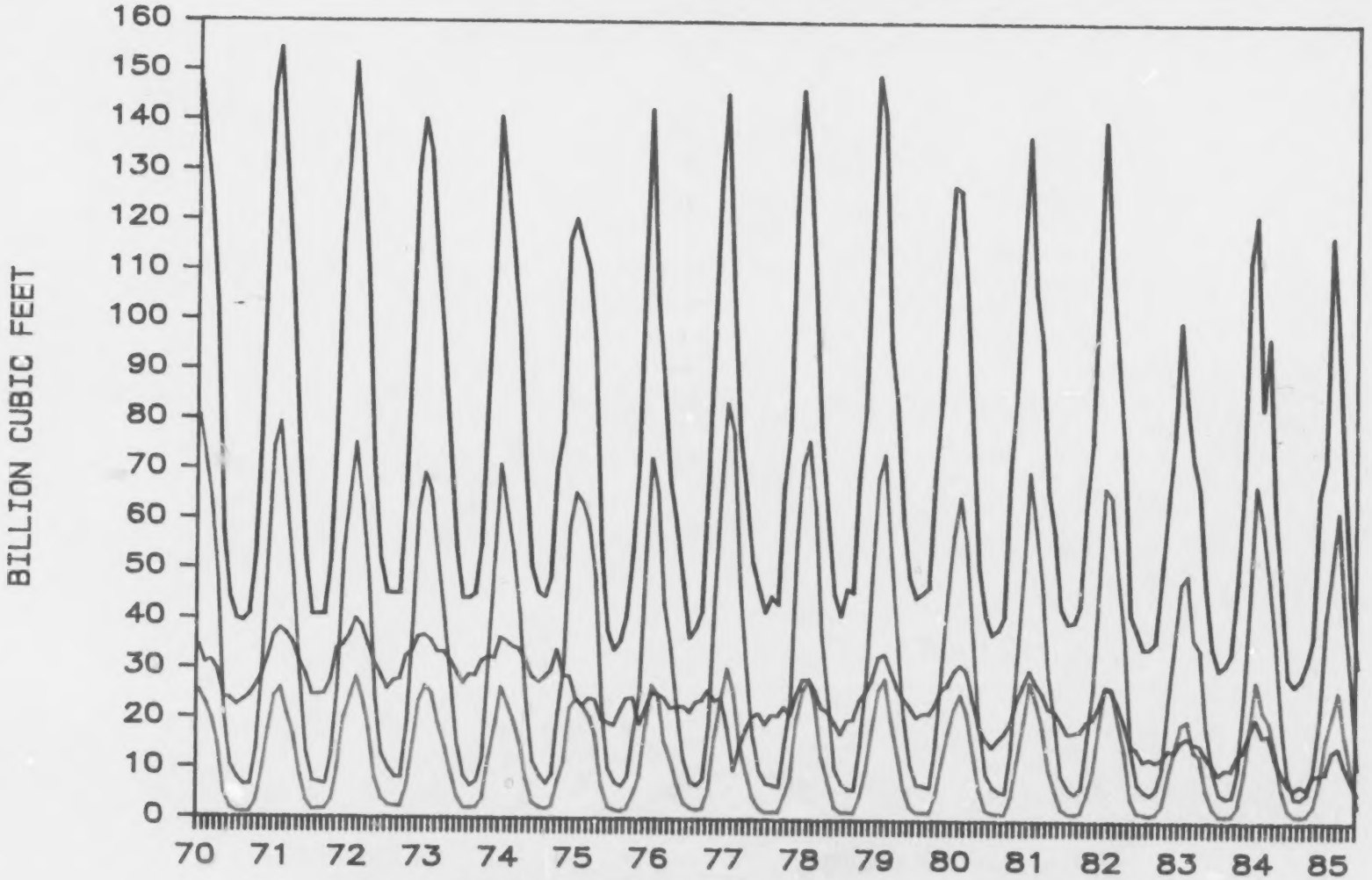


Table 12. Projected Aggregate Supply and Requirements for Natural Gas for Eight Major Utilities
May 1985 - April 1986
(MMCF)

	Supply	Demand	Deficiency	Percent Deficiency
MAY	44780	44421	-359	-0.81
JUNE	34009	34009	0	0.00
JULY	32365	32365	0	0.00
AUGUST	33092	33092	0	0.00
SEPTEMBER	35123	35123	0	0.00
OCTOBER	48391	48391	0	0.00
NOVEMBER	64619	64619	0	0.00
DECEMBER	87864	87864	0	0.00
JANUARY	103161	103161	0	0.00
FEBRUARY	90341	90341	0	0.00
MARCH	71632	71632	0	0.00
APRIL	51276	51276	0	0.00
TOTALS				
SUMMER	279036	278677	-359	-0.13
WINTER	417617	417617	0	0.00
ANNUAL	696653	696294	-359	-0.05

NOTE: A positive deficiency indicates a shortage;
A negative deficiency indicates a surplus.

SOURCE: ODOE FORM SG-1 and the OHIO DIVISION OF ENERGY

FIG. 8. PROJECTED SUPPLY AND REQUIREMENTS OF NATURAL GAS BY SECTOR; TOTAL OF EIGHT MAJOR COMPANIES (MAY 1985 - APRIL 1986)

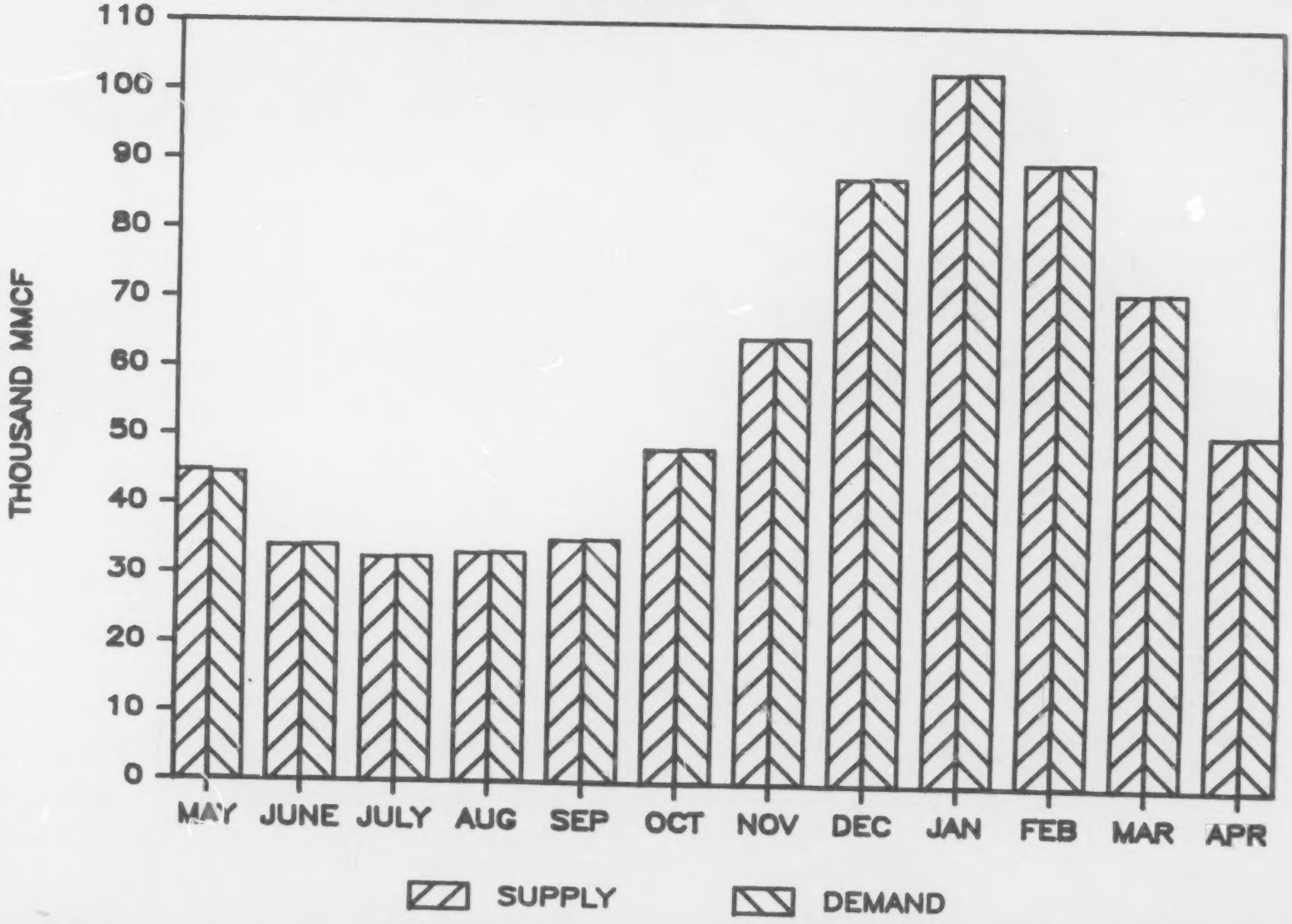


TABLE 13 COMPARISON BETWEEN ONE YEAR OF ACTUAL AND FORECAST DEMAND
FOR EIGHT MAJOR OHIO GAS UTILITIES BY SOURCE
(MMCF)

MONTH/YEAR	DEGREE DAYS	RESIDENTIAL REQUIREMENT	COMMERCIAL REQUIREMENT	INDUSTRIAL REQUIREMENT	OTHER REQUIREMENT	STORAGE (IN)	TOTAL REQUIREMENT	DEFICIENCY
5/85	202	17345	7724	12575	-3640	10417	44421	-359
5/84	196	21988	8990	12161	-4915	10301	48525	0
	3.1%	-21.1%	-14.1%	3.4%	25.9%	1.1%	-8.5%	999.9%
6/85	30	9491	4439	11890	-1707	9896	34809	0
6/84	29	10876	4903	9796	-4229	9698	31044	0
	3.4%	-12.7%	-9.5%	21.4%	59.6%	2.0%	9.6%	0.0%
7/85	5	7301	3410	11120	905	9629	32365	0
7/84	5	7053	3562	8644	705	9461	29425	0
	0.0%	3.5%	-4.3%	28.6%	28.4%	1.8%	10.0%	0.0%
8/85	11	6803	3187	11885	2220	8997	33092	0
8/84	11	6924	3480	9794	1069	9477	30744	0
	0.0%	-1.7%	-8.4%	21.3%	107.7%	-5.1%	7.6%	0.0%
9/85	87	7937	3628	11701	3177	8680	35123	0
9/84	87	8208	3945	8839	4014	9056	34062	0
	0.0%	-3.3%	-8.0%	32.4%	-20.9%	-4.2%	3.1%	0.0%
10/85	334	13864	5951	13039	8654	6883	48391	0
10/84	334	13111	5720	11632	1751	7131	39345	0
	0.0%	5.7%	4.0%	12.1%	394.2%	-3.5%	23.0%	0.0%
11/85	690	27780	12297	12828	11714	0	64619	0
11/84	686	23267	10729	12052	21983	113	68144	0
	0.6%	19.4%	14.6%	6.4%	-46.7%	-100.0%	-5.2%	0.0%
12/85	1052	44608	19782	13948	9526	0	87864	0
12/84	1028	43203	19058	12214	-103	73	76445	0
	2.3%	3.3%	3.8%	14.2%	9348.5%	-100.0%	18.0%	0.0%
1/86	1141	56349	24933	15111	5442	1326	103161	0
1/85	1124	53278	23719	16390	26075	0	119462	0
	1.5%	5.8%	5.1%	-7.8%	-79.1%	999.9%	-13.6%	0.0%
2/86	980	54540	24427	14751	-4694	1326	90341	0
2/85	977	64437	28587	17473	-10349	0	100148	0
	0.3%	-15.4%	-14.6%	-15.6%	54.6%	999.9%	-9.8%	0.0%
3/86	823	44601	19701	11685	-4355	0	71632	0
3/85	814	43841	19429	13467	-6007	92	70822	0
	1.1%	1.7%	1.4%	-13.2%	27.5%	-100.0%	1.1%	0.0%
4/86	735	31095	13844	9940	-7070	3467	51276	0
4/85	455	29904	12787	10570	-11765	5596	47092	0
	61.5%	4.0%	8.3%	-6.0%	39.9%	-38.0%	8.9%	0.0%
SUMMER TOTAL	1404	93836	42183	82150	2539	57969	278677	-359
	1117	98064	43387	71436	-13370	60720	260237	0
	25.7%	-4.3%	-2.8%	15.0%	119.0%	-4.5%	7.1%	999.9%
WINTER TOTAL	4686	227878	101140	68323	17633	2652	417617	0
	4629	228024	101522	71596	31599	278	433021	0
	1.2%	-0.1%	-0.4%	-4.6%	-44.2%	854.0%	-3.6%	0.0%
YEAR TOTAL	6090	321714	143323	150473	20172	60621	696294	-359
	5746	326090	144909	143032	18229	60998	693258	0
	6.0%	-1.3%	-1.1%	5.2%	10.7%	-0.6%	0.4%	999.9%

NOTE: (1) WINTER TOTAL IS A SUM OF THE VALUES IN NOVEMBER, DECEMBER, JANUARY, FEBRUARY, AND MARCH

(2) 999.9% REPRESENTS AN INFINITE PERCENTAGE CHANGE RESULTING FROM AN INCREASE FROM A ZERO VALUE TO SOME NON-ZERO VALUE AND THUS A DIVISION BY ZERO.

(3) A POSITIVE DEFICIENCY INDICATES SHORTAGE, A NEGATIVE DEFICIENCY INDICATES SURPLUS.

FIG. 9. PROJECTED REQUIREMENTS OF NATURAL GAS BY SECTOR
EIGHT MAJOR COMPANIES
(MAY 1985 - APRIL 1986)

TABLE 14 COMPARISON BETWEEN ONE YEAR OF ACTUAL AND FORECAST SUPPLY FOR EIGHT MAJOR OHIO GAS UTILITIES BY SOURCE (MMCF)

MO/YR	COLUMBIA GAS	CONSOLID-ATED GAS	LAWREN-CEBURG	MICH. MISC.	PANHANDLE EAST	TENN. GAS	TEXAS EASTERN	TEXAS GAS	ENERG GAS	OHIO PRODUCT	SNG	STORAGE/ PROPANE	OTHER	TOTAL SUPPLIES
5/85	13292	17362	2495	193	4449	150	630	12	0	4908	1039	230	28	44788
5/84	14786	17886	2618	270	4436	151	799	11	0	5395	1419	438	314	48525
	-10.1%	-2.9%	-4.7%	-28.5%	0.3%	-0.7%	-21.2%	9.1%	0.0%	-9.0%	-26.8%	-47.5%	-93.7%	-7.7%
6/85	7488	13822	98	149	4192	115	575	7	0	4915	1006	165	2285	34889
6/84	7743	13396	2148	267	633	69	559	6	0	4907	1171	167	-22	31044
	-3.3%	3.2%	-95.4%	-44.2%	562.2%	66.7%	2.9%	16.7%	0.0%	0.2%	-14.1%	-1.2%	10486.4%	9.6%
7/85	5944	11722	93	127	4337	109	632	6	0	4989	1076	178	3240	32365
7/84	6879	10316	283	208	2541	112	601	6	0	5640	1149	176	1514	29425
	-13.6%	13.6%	-67.1%	-38.9%	70.7%	-2.7%	5.2%	0.0%	0.0%	-13.0%	-6.4%	-3.4%	114.0%	10.0%
8/85	6861	11671	93	98	4486	118	748	7	0	4816	1076	165	3841	33892
8/84	6446	12815	90	293	504	114	718	6	0	5828	1161	172	2597	30744
	6.4%	-8.9%	3.3%	-66.6%	774.2%	3.5%	3.1%	16.7%	0.0%	-17.4%	-7.3%	-4.1%	17.1%	7.4%
9/85	7685	12928	98	114	4337	120	730	9	0	4773	1076	165	3184	35123
9/84	7853	9418	89	318	6053	106	729	8	0	5338	518	163	3485	34862
	-2.2%	37.3%	1.1%	-64.2%	-28.3%	13.2%	0.1%	12.5%	0.0%	-10.6%	111.8%	1.2%	-8.6%	3.1%
10/85	15142	18683	93	119	4684	141	737	15	0	4778	0	178	3989	48391
10/84	11315	10300	92	313	6414	122	738	10	0	5624	512	198	3715	39345
	33.8%	80.6%	1.1%	-62.8%	-27.0%	15.6%	-0.1%	50.0%	0.0%	-15.0%	-100.0%	-10.5%	5.2%	23.0%
11/85	27922	8945	98	175	4732	137	631	26	0	4681	0	11393	5887	64419
11/84	30725	10462	92	408	3618	153	629	33	0	5257	1274	10668	4825	68144
	-9.1%	-14.5%	-2.2%	-57.1%	30.8%	-10.5%	0.3%	-21.2%	0.0%	-11.0%	-100.0%	6.8%	22.0%	-5.2%
12/85	41665	14563	93	157	5122	144	676	46	0	4713	0	14755	5930	87864
12/84	32980	11394	100	430	5125	155	588	36	0	5023	1572	11870	5252	74445
	26.4%	27.8%	-7.0%	-63.5%	-0.1%	-7.1%	15.0%	27.8%	0.0%	-6.2%	-100.0%	24.3%	12.9%	18.0%
1/84	58935	17838	93	228	5898	155	610	50	0	4566	0	18898	6386	103161
1/85	57412	23581	97	582	6861	165	641	41	0	5807	1189	18891	5855	119462
	-11.3%	-27.5%	-4.1%	-62.2%	-15.9%	-6.1%	-4.8%	-18.0%	0.0%	-21.4%	-100.0%	0.0%	7.7%	-13.6%
2/84	44735	18795	84	286	4658	138	565	45	0	4537	0	18937	5641	98341
2/85	51291	20803	102	176	6034	138	549	48	0	4889	1021	18887	4298	100148
	-12.8%	-9.7%	-17.6%	17.8%	-22.8%	6.2%	2.9%	-6.3%	0.0%	-7.2%	-100.0%	1.2%	31.2%	-9.8%
3/84	35389	13887	93	179	3419	112	356	37	0	4495	298	9129	4238	71632
3/85	27685	13546	85	98	4347	122	502	29	0	5357	1065	9637	8349	70822
	27.8%	2.5%	9.4%	82.7%	-21.3%	-8.2%	-29.1%	27.6%	0.0%	-16.1%	-72.0%	-5.3%	-49.2%	1.1%
4/84	23045	12347	98	39	3123	18	343	22	0	4516	288	3663	3782	51276
4/85	16649	12183	92	31	5143	112	337	16	0	5958	1061	1180	4338	47092
	38.4%	1.3%	-2.2%	25.8%	-39.3%	-83.9%	1.8%	37.5%	0.0%	-24.2%	-72.9%	210.4%	-12.7%	8.9%
SUMMER TOTAL														
	79377	97647	3844	839	29528	771	4387	78	0	33615	5561	4728	19461	279836
	71671	84306	5412	1780	25724	786	4481	63	0	38690	6983	2486	15935	260237
	10.8%	13.1%	-43.8%	-58.6%	14.8%	-1.9%	-2.1%	23.8%	0.0%	-13.1%	-20.4%	90.2%	22.1%	7.2%
WINTER TOTAL														
	200644	73228	453	937	23029	686	2838	204	0	22992	298	64312	28802	417617
	200813	79704	474	1694	25185	725	2909	207	0	26333	6121	61073	28579	431611
	0.1%	-8.1%	-4.8%	-44.7%	-8.6%	-5.4%	-2.4%	-1.4%	0.0%	-12.7%	-95.1%	5.3%	-2.0%	-3.4%
YEAR TOTAL														
	280023	170867	3497	1776	52557	1457	7225	282	0	56607	5859	69040	47463	696453
	271684	164012	5888	3394	50909	1511	7390	270	0	65023	13104	63559	44514	691388
	3.1%	2.9%	-40.6%	-47.7%	3.2%	-3.6%	-2.2%	4.4%	0.0%	-12.9%	-55.3%	8.6%	6.6%	0.5%

NOTE: (1) WINTER TOTAL IS A SUM OF THE VALUES IN NOVEMBER, DECEMBER, JANUARY, FEBRUARY, AND MARCH.

(2) 999.9% REPRESENTS AN INFINITE PERCENTAGE CHANGE RESULTING FROM AN INCREASE FROM A ZERO VALUE TO SOME NON-ZERO VALUE AND THUS A DIVISION BY ZERO.

Table 15: Independent Forecasts of Gas Supply and Demand for the Eight Major Ohio Gas Utilities November 1985 - March 1986 (MMCF)

	Normal Weather			10% Colder Than Normal Weather		
	Supply	Demand	Surplus [1] (Deficiency)	Supply	Demand	Surplus [1] (Deficiency)
Cincinnati Gas & Electric	48,875	49,400	(525)	52,616	51,290	1,326
Columbia Gas	142,852	159,300	(16,448)	152,617	167,714	(15,097)
Dayton Power & Light	35,617	34,800	817	38,551	36,525	2,026
East Ohio Gas	165,992	168,500	(2,508)	177,040	177,401	(361)
National Gas	5,444	5,444	0	5,707	5,707	0
Ohio Gas	4,371	4,371	0	4,697	4,697	0
River Gas	2,735	2,735	0	2,882	2,882	0
West Ohio Gas	7,551	7,551	0	8,075	8,075	0
Total	413,437	432,101	(18,664)	442,185	454,291	(12,106)

[1]
Note: Numbers within parentheses indicate deficiency. Columbia Gas of Ohio has contractual agreements that could meet any potential deficiencies. According to 1984 data, East Ohio Gas has an ample supply in storage that could meet their demands.

Source: June 1985 ODOE Form SG-2 of reporting utilities, and the Ohio Division of Energy.

Table 16-A The Growth of Non-tariff Industrial Sales in Ohio (1978-1984)
(TBTU)

Year	Industrial Tariff Sales	Industrial Non-tariff Sales	Total Industrial Sales	Share of Non-tariff Sales in Total Industrial Requirements
1978	334.79	29.18	363.97	8.02%
1979	354.92	30.48	385.40	7.91%
1980	324.58	31.71	356.29	8.90%
1981	311.38	38.10	349.48	10.90%
1982	238.54	33.78	272.32	12.40%
1983	191.70	49.11	240.81	20.39%
1984	167.60	88.11	255.71	34.46%

Source: Ohio Division of Energy

Table 16-B: Independent Forecast of Annual Natural Gas End Use Requirements, Calendar Year 1985
(TBTU)

	Actual 1984	Lower 95% Confidence Limit	Forecast 1986	Upper 95% Confidence Limit
Residential	367.8	314	343	378
Commercial	159.0	136	158	173
Industrial Tariff Sales	162.4	121	138	154
Other*	7.7	4	8	12
Total	534.5	575	634	702
Industrial Non-tariff Sales	88.1	89	100	111
Total Requirements	622.6	664	734	813

Source: Ohio Division of Energy

*Other includes transportation and electric utilities sectors.
Note: Storage is not included in the total. 66.8 TBTU was added to storage in 1984. Also note that non-tariff sales include natural gas procured under the industrial self-help program, and the SMP and FOD programs.

Table 17: Independent Forecasts of Gas Supply
and Demand for Cincinnati Gas and Electric Company
November 1985 - March 1986
(MMCF)

	Normal Weather				10% Colder Than Normal Weather			
	Supply	HDD[2]	Demand	Surplus (Deficiency)	Supply	HDD[2]	Demand	Surplus (Deficiency)[3]
November 1985	7,116	648	6,800	316	7,670	713	7,081	589
December 1985	10,555	967	9,500	1,055	11,382	1,064	9,918	1,464
January 1986	12,184	1,119	12,100	84	13,141	1,231	12,583	558
February 1986	10,407	921	12,000	(1,593)	11,195	1,013	12,398	(1,203)
March 1986	8,613	719	9,000	(387)	9,228	791	9,311	(83)
Total	48,875		49,400	(525)	52,616		51,290	1,326

Notes: Totals may not add due to independent rounding.
HDD - Heating Degree-Days.
Numbers within parentheses indicate deficiency. Projected deficiency levels can be met by the contractual agreements set up with their gas suppliers.

Source: Cincinnati Gas & Electric's July ODOE Form SG-2, and the Ohio Division of Energy.

Table 18: Independent Forecasts of Gas Supply
and Demand for Columbia Gas of Ohio
November 1985 - March 1986
(MMCF)

	Normal Weather				10% Colder Than Normal Weather			
	Supply	HDD[2]	Demand	Surplus (Deficiency)[3]	Supply	HDD[2]	Demand	Surplus (Deficiency)[3]
November 1985	21,929	589	22,800	(871)	23,045	648	23,841	(796)
December 1985	29,755	930	26,700	3,055	31,603	1,023	28,341	3,262
January 1986	35,737	1,192	41,500	(5,763)	38,230	1,311	43,599	(5,369)
February 1986	30,637	1,146	39,800	(9,163)	33,082	1,261	41,829	(8,747)
March 1986	24,794	908	28,500	(3,706)	26,657	999	30,105	(3,448)
Total	142,852		159,300	(16,448)	152,617		167,714	(15,097)

Notes: 1.-Totals may not add due to independent rounding.
2.-HDD = Heating Degree-Days.
3.-Numbers within parentheses indicate deficiency. Projected deficiency levels can be met by the contractual agreements set up with their gas suppliers.
4.-The nature and implications of the projected deficiencies for the forth coming heating season are discussed on page 40.

Source: Columbia Gas of Ohio's July ODOE Form SG-2, and the Ohio Division of Energy.

Table 19: Independent Forecasts of Gas Supply
and Demand for Dayton Power & Light Company
November 1985 - March 1986
(MMCF)

	Normal Weather				10% Colder Than Normal Weather			
	Supply	HDD[2]	Demand	Surplus (Deficiency)	Supply	HDD[2]	Demand	Surplus (Deficiency)[3]
November 1985	4,889	487	4,000	889	5,168	536	4,185	983
December 1985	7,137	896	6,600	537	7,701	986	6,940	761
January 1986	8,843	1,176	8,700	143	9,611	1,294	9,146	465
February 1986	8,704	1,111	8,800	(96)	9,448	1,222	9,221	227
March 1986	6,044	882	6,700	(656)	6,623	970	7,034	(411)
Total	35,617		34,800	817	38,551		36,525	2,026

Notes: Totals may not add due to independent rounding.
HDD - Heating Degree-Days.
Numbers within parentheses indicate deficiency. Projected deficiency levels can be met by the contractual agreements set up with their gas suppliers.

Source: Dayton Power & Light Company's July ODOE Form SG-2, and the Ohio Division of Energy

Table 20: Independent Forecasts of Gas Supply
and Demand for East Ohio Gas Company
November 1985 - March 1986
(MMCF)

	Normal Weather				10% Colder Than Normal Weather			
	Supply	HDD[2]	Demand	Surplus (Deficiency)	Supply	HDD[2]	Demand	Surplus (Deficiency)[3]
November 1985	28,471	554	27,500	971	30,045	609	28,504	1,541
December 1985	34,215	968	31,000	3,215	36,615	1,065	32,770	3,845
January 1986	39,466	1,206	45,000	(5,534)	42,261	1,327	47,208	(4,947)
February 1986	35,035	1,180	35,000	35	37,369	1,298	37,154	216
March 1986	28,805	967	30,000	(1,195)	30,750	1,064	31,765	(1,015)
Total	165,992		168,500	(2,508)	177,040		177,401	(361)

Notes: Totals may not add due to independent rounding.
HDD - Heating Degree-Days.
Numbers within parentheses indicate deficiency. Projected deficiency levels can be met with gas in storage.

Source: East Ohio Gas Company's July ODOE Form SG-2, and the Ohio Division of Energy

APPENDIX A: ELECTRICITY

Table A-1: Allegheny Power System
Forecast of Electric Energy Demand
(1000 MWH)

Month	Actual Demand (1984-1985)	Utility Forecast (1985-1986)	%Change (Utility Forecast vs. Actual	ODOE Forecast (1985-1986)	%Change (ODOE Forecast vs. Actual)
July	2,616	2,837	8.45	2,664	1.83
August	2,843	2,882	1.37	2,776	-2.36
September	2,540	2,722	7.17	2,563	0.91
October	2,646	2,764	4.46	2,680	1.28
November	2,768	2,816	1.73	2,743	-0.90
December	2,833	3,218	13.59	2,980	5.19
January	3,314	3,301	-0.39	3,251	-1.90
February	2,905	3,008	3.55	2,886	-0.65
March	2,910	3,087	6.08	2,983	2.51
April	2,533	2,804	6.49	2,675	1.60
May	2,614	2,695	3.10	2,643	1.11
June	2,531	2,680	5.89	2,632	3.99

Source: Form EIA-119M and the Ohio Division of Energy.

Table A-2: American Electric Power
Forecast of Electric Energy Demand
(1000 MWH)

Month	Actual Demand (1984-1985)	Utility Forecast (1985-1986)	%Change (Utility Forecast vs. Actual	ODOE Forecast (1985-1986)	%Change (ODOE Forecast vs. Actual)
July	7,110	7,453	4.82	6,976	-1.88
August	7,801	7,566	-3.01	7,467	-4.28
September	6,564	6,875	4.74	6,363	-3.06
October	6,732	7,116	5.70	6,443	-4.29
November	7,114	7,373	3.64	6,860	-3.57
December	7,262	8,350	14.98	7,217	-0.62
January	7,976	9,028	13.19	7,932	-0.55
February	7,567	7,968	5.30	7,281	-3.78
March	7,370	8,113	10.08	7,303	-0.91
April	6,707	7,143	6.50	6,639	-1.01
May	6,737	6,958	3.28	6,502	-3.49
June	*	7,127	*	6,621	ERR

* = Actual figures not available
Source: Form EIA-119M and the Ohio Division of Energy.

Table A-3: Cincinnati Gas and Electric
Forecast of Electric Energy Demand
(1000 MWH)

Month	Actual Demand (1984-1985)	Utility Forecast (1985-1986)	%Change (Utility Forecast vs. Actual	ODOE Forecast (1985-1986)	%Change (ODOE Forecast vs. Actual)
July	1,433	1,568	9.42	1,567	9.35
August	1,545	1,598	3.43	1,603	3.75
September	1,246	1,324	6.26	1,332	6.90
October	1,240	1,245	0.40	1,301	4.92
November	1,312	1,292	-1.52	1,333	1.60
December	1,360	1,447	6.40	1,482	8.97
January	1,651	1,527	-7.51	1,630	-1.27
February	1,422	1,363	-4.15	1,411	-0.77
March	1,344	1,389	3.35	1,429	6.32
April	1,241	1,217	-1.93	1,276	2.82
May	1,269	1,317	3.78	1,315	3.62
June	1,320	1,463	10.83	1,466	11.06

Source: Form EIA-119M and the Ohio Division of Energy.

Table A-4: Cleveland Electric Illuminating Company
Forecast of Electric Energy Demand
(1000 MWH)

Month	Actual Demand (1984-1985)	Utility Forecast (1985-1986)	%Change (Utility Forecast vs. Actual	ODOE Forecast (1985-1986)	%Change (ODOE Forecast vs. Actual)
July	1,498	1,674	11.75	1,646	9.88
August	1,648	1,668	1.21	1,713	3.94
September	1,504	1,564	3.99	1,566	4.12
October	1,506	1,553	3.12	1,537	2.06
November	1,504	1,572	4.52	1,522	1.20
December	1,560	1,639	5.06	1,637	4.94
January	1,768	1,732	-2.04	1,775	0.40
February	1,575	1,673	6.22	1,604	1.84
March	1,630	1,651	1.29	1,677	2.88
April	1,521	1,552	2.04	1,530	0.59
May	1,566	1,555	-0.70	1,510	-3.58
June	1,489	1,623	9.00	1,603	7.66

Source: Form EIA-119M and the Ohio Division of Energy.

Table A-5: Dayton Power and Light
Forecast of Electric Energy Demand
(1000 MWH)

Month	Actual Demand (1984-1985)	Utility Forecast (1985-1986)	%Change (Utility Forecast vs. Actual	ODOE Forecast (1985-1986)	%Change (ODOE Forecast vs. Actual)
July	920	997	8.37	1,008	9.57
August	1,000	968	-3.20	1,051	5.10
September	841	884	5.11	925	9.99
October	881	918	4.20	916	3.97
November	938	918	-2.13	985	5.01
December	953	1,032	8.29	1,041	9.23
January	1,162	1,109	-4.56	1,188	2.24
February	1,005	986	-1.89	1,040	3.48
March	965	987	2.28	1,028	6.53
April	882	876	-0.68	929	5.33
May	893	875	-2.02	924	3.47
June	883	904	2.38	1,003	13.59

Source: Form EIA-119M and the Ohio Division of Energy.

Table A-6: Ohio Edison Company
Forecast of Electric Energy Demand
(1000 MWH)

Month	Actual Demand (1984-1985)	Utility Forecast (1985-1986)	%Change (Utility Forecast vs. Actual	ODOE Forecast (1985-1986)	%Change (ODOE Forecast vs. Actual)
July	2,015	2,138	6.10	2,064	2.43
August	2,175	2,151	-1.10	2,128	-2.16
September	1,871	2,044	9.25	1,915	2.35
October	1,950	2,111	8.26	1,966	0.82
November	1,983	2,009	1.31	1,974	-0.45
December	2,026	2,186	7.90	2,100	3.65
January	2,303	2,339	1.56	2,268	-1.52
February	2,049	2,106	2.78	2,031	-0.88
March	2,099	2,230	6.24	2,141	2.00
April	1,935	2,006	3.67	1,936	0.05
May	1,944	1,990	2.37	1,929	-0.77
June	*	1,997	*	1,673	*

* = Actual figures not available
Source: Form EIA-119M and the Ohio Division of Energy.

Table A-7: Ohio Valley Electric Corporation
Forecast of Electric Energy Demand
(1000 MWH)

Month	Actual Demand (1984-1985)	Utility Forecast (1985-1986)	%Change (Utility Forecast vs. Actual)
July	950	1,481	55.89
August	953	1,481	55.40
September	932	1,344	44.21
October	1,054	1,395	32.35
November	1,021	1,405	37.61
December	1,056	1,470	39.20
January	1,052	1,401	33.17
February	1,003	1,248	24.43
March	1,003	1,396	39.18
April	852	1,351	58.57
May	826	1,382	67.31
June	*	1,317	*

* = Actual figures not available
Source: Form EIA-119M and the Ohio Division of Energy.

Table A-8: Toledo Edison Company
Forecast of Electric Energy Demand
(1000 MWH)

Month	Actual Demand (1984-1985)	Utility Forecast (1985-1986)	%Change (Utility Forecast vs. Actual	ODOE Forecast (1985-1986)	%Change (ODOE Forecast vs. Actual)
July	656	695	5.95	680	3.66
August	704	687	-2.41	700	-0.57
September	599	658	9.85	625	4.34
October	626	656	4.79	641	2.40
November	647	654	1.08	651	0.62
December	679	714	5.15	701	3.24
January	751	776	3.33	755	0.53
February	682	717	5.13	673	-1.32
March	681	743	9.10	701	2.94
April	622	654	5.14	629	1.13
May	*	660	*	630	*
June	*	677	*	652	*

* = Actual figures not available
Source: Form EIA-119M and the Ohio Division of Energy.

Table A-9: Independent Forecast of Ohio Electricity Demand
Residential Sector
(1000 MWH)

Month	Lower 95% Confidence Limit	ODOE Forecast (1985-86)	Upper 95% Confidence Limit	Actual (1984-1985)	Forecast Percentage Change
July	1,971	2,405	2,839	2,350	2.3
August	2,040	2,500	2,960	2,466	1.4
September	1,782	2,267	2,752	2,230	1.7
October	1,408	1,917	2,426	1,976	-3.0
November	1,572	2,104	2,635	2,160	-2.6
December	2,076	2,630	3,183	2,715	-3.1
January	2,603	3,177	3,751	3,178	.0
February	2,388	2,982	3,577	3,250	-8.2
March	1,985	2,599	3,213	2,673	-2.8
April	1,648	2,281	2,914	2,329	-2.1
May	1,268	1,949	2,630	1,923	1.4
June	1,277	2,004	2,731	2,005	.0

Note: The forecast is based upon monthly summary statistics published by the Ohio Electric Utility Institute, for the eight major investor-owned electric utilities (excluding OVEC).

FIG. A-1. MONTHLY OHIO RESIDENTIAL ELECTRICITY CONSUMPTION
ACTUAL AND PROJECTED (JANUARY 1974 - JUNE 1986)

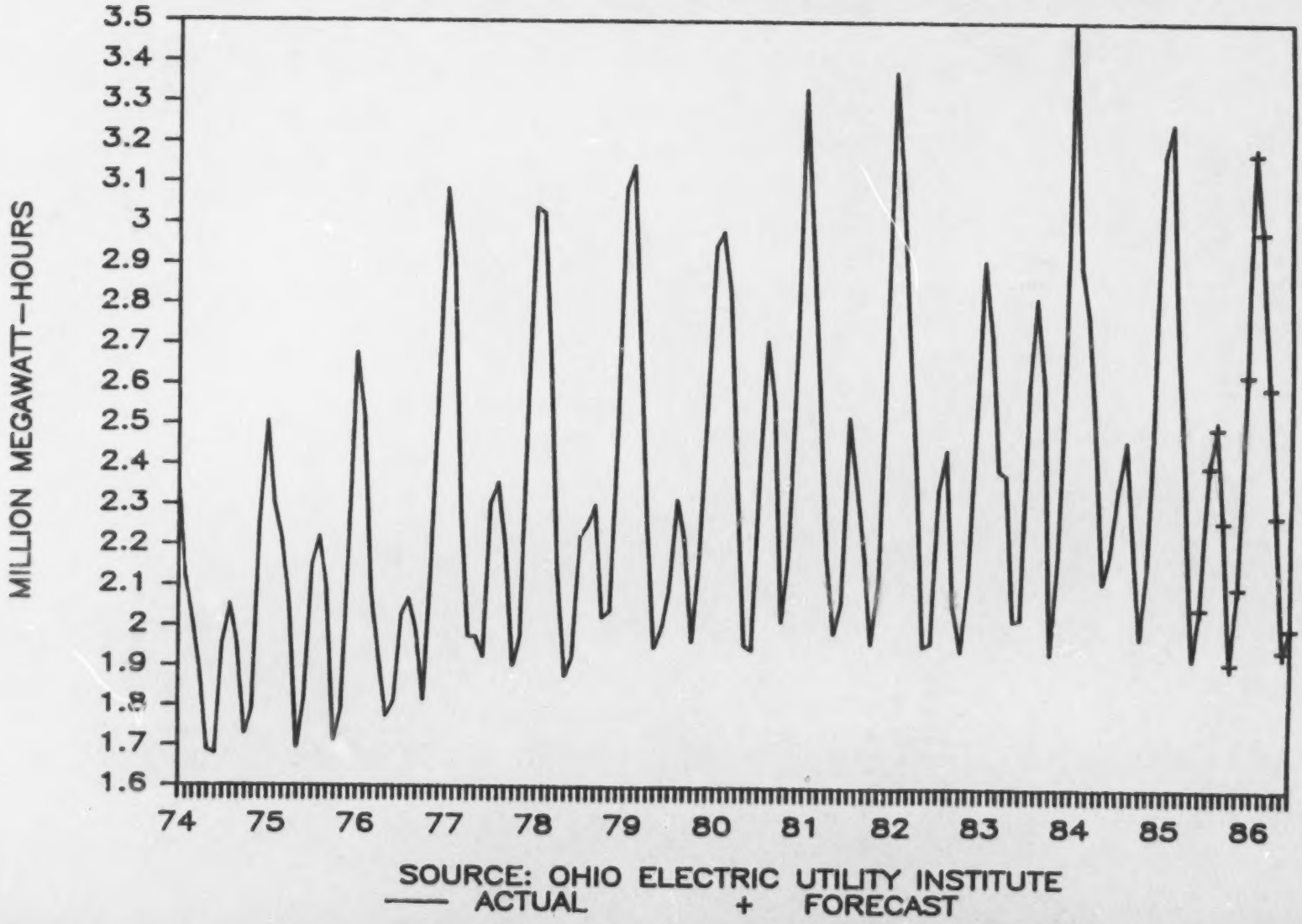


Table A-10: Independent Forecast of Ohio Electricity Demand
Commercial Sector
(1000 MWH)

Month	Lower 95% Confidence Limit	ODOE Forecast (1985-86)	Upper 95% Confidence Limit	Actual (1984-1985)	Forecast Percentage Change
July	1,977	2,140	2,303	2,013	6.3
August	2,003	2,174	2,345	2,099	3.6
September	1,895	2,073	2,252	1,944	6.6
October	1,645	1,831	2,016	1,776	3.1
November	1,624	1,816	2,008	1,777	2.2
December	1,733	1,932	2,131	1,852	4.3
January	1,888	2,093	2,298	2,019	3.7
February	1,847	2,058	2,269	2,027	1.5
March	1,755	1,972	2,189	1,885	4.6
April	1,658	1,881	2,104	1,818	3.5
May	1,606	1,845	2,083	1,839	0.3
June	1,791	2,044	2,297	1,910	7.0

Note: The forecast is based upon monthly summary statistics published by the Ohio Electric Utility Institute, for the eight major investor-owned electric utilities (excluding OVEC).

FIG. A-2. MONTHLY OHIO COMMERCIAL ELECTRICITY CONSUMPTION
ACTUAL AND PROJECTED (JANUARY 1974 - JUNE 1986)

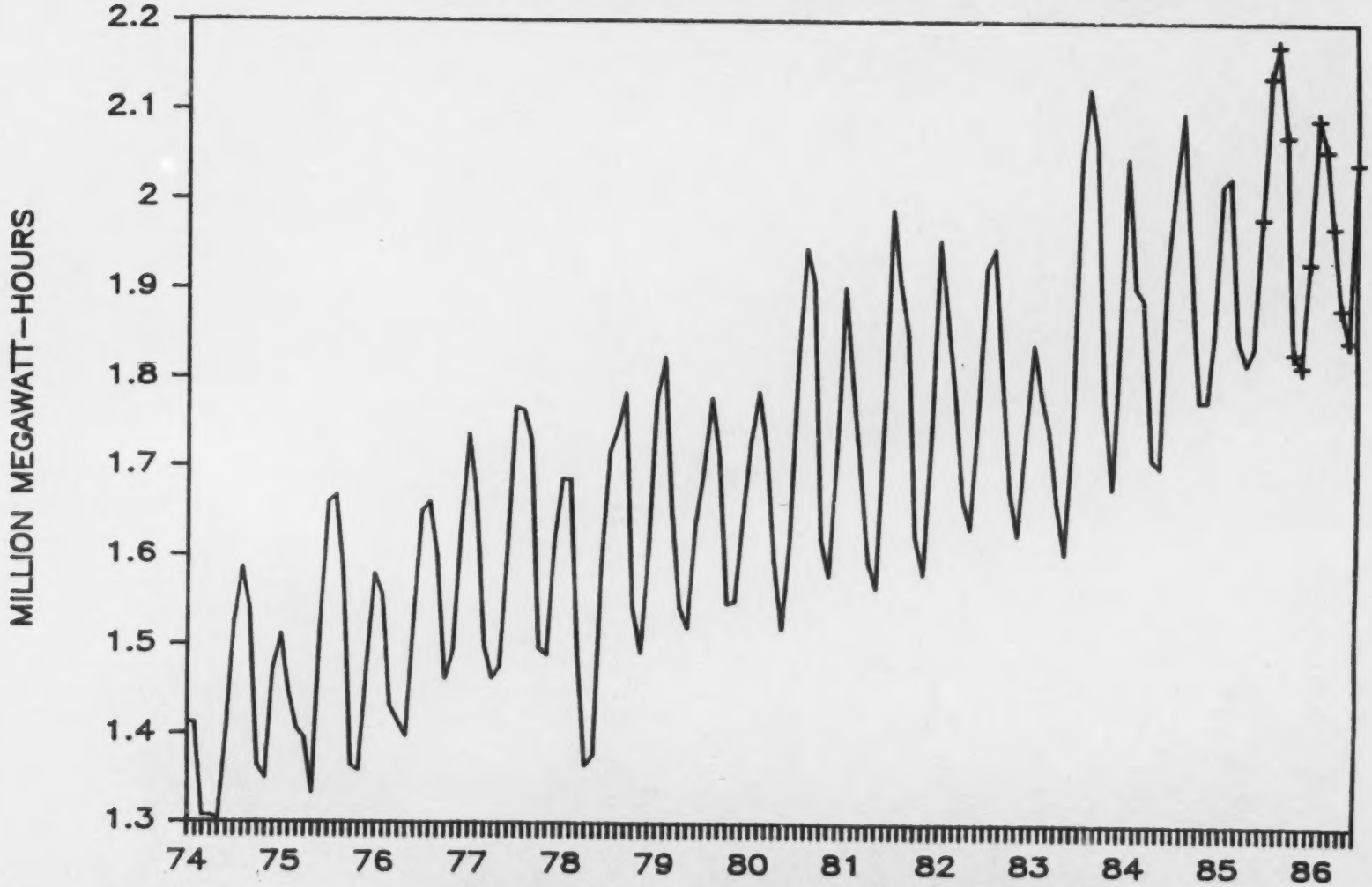
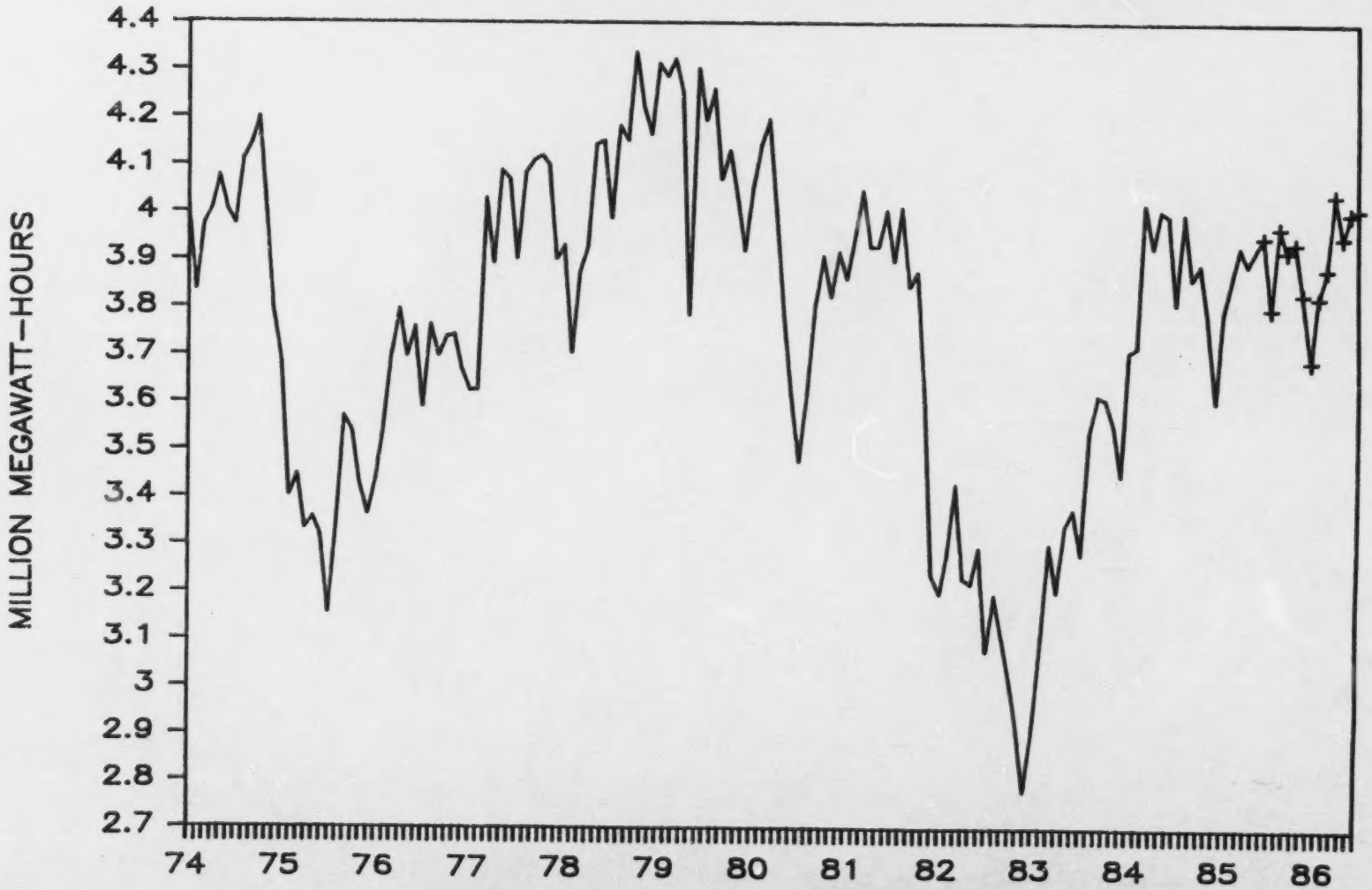


Table A-11: Independent Forecast of Ohio Electricity Demand
Industrial Sector
(1000 MWH)

Month	Lower 95% Confidence Limit	ODOE Forecast (1985-86)	Upper 95% Confidence Limit	Actual (1984-1985)	Forecast Percentage Change
July	3,408	3,799	4,189	3,809	-0.3
August	3,519	3,970	4,421	3,999	-0.7
September	3,416	3,921	4,426	3,860	1.6
October	3,385	3,938	4,490	3,892	1.2
November	3,234	3,831	4,428	3,776	1.5
December	3,051	3,689	4,327	3,603	2.4
January	3,147	3,824	4,501	3,794	0.8
February	3,169	3,883	4,597	3,860	0.6
March	3,290	4,039	4,787	3,930	2.8
April	3,168	3,950	4,731	3,891	1.5
May	3,167	4,001	4,834	3,924	2.0
June	3,126	4,009	4,891	3,807	5.3

Note: The forecast is based upon monthly summary statistics published by the Ohio Electric Utility Institute, for the eight major investor-owned electric utilities (excluding OVEC).

FIG. A-3. MONTHLY OHIO INDUSTRIAL ELECTRICITY CONSUMPTION ACTUAL AND PROJECTED (JANUARY 1974 - JUNE 1986)



SOURCE: OHIO ELECTRIC UTILITY INSTITUTE
—— ACTUAL + PROJECTED

Table A-12: Independent Forecast of Ohio Electricity Demand
All Sectors
(1000 MWH)

Month	Lower 95% Confidence Limit	ODOE Forecast (1985-86)	Upper 95% Confidence Limit	Actual (1984-1985)	Forecast Percentage Change
July	7,883	8,699	9,514	8,571	1.5
August	8,107	9,049	9,991	8,974	0.8
September	7,630	8,683	9,736	8,414	3.2
October	7,000	8,154	9,308	8,046	1.3
November	6,967	8,213	9,459	8,124	1.1
December	7,450	8,782	10,114	8,635	1.7
January	8,187	9,600	11,013	9,468	1.4
February	7,899	9,389	10,878	9,614	-2.3
March	7,517	9,079	10,641	8,930	1.7
April	6,907	8,539	10,170	8,423	1.4
May	6,510	8,253	9,996	8,078	2.2
June	6,608	8,455	10,303	8,133	4.0

Note: The forecast is based upon monthly summary statistics published by the Ohio Electric Utility Institute, for the eight major investor-owned electric utilities (excluding OVEC).

FIG. A-4. MONTHLY TOTAL OHIO ELECTRICITY CONSUMPTION
ACTUAL AND PROJECTED (JANUARY 1974 - JUNE 1986)

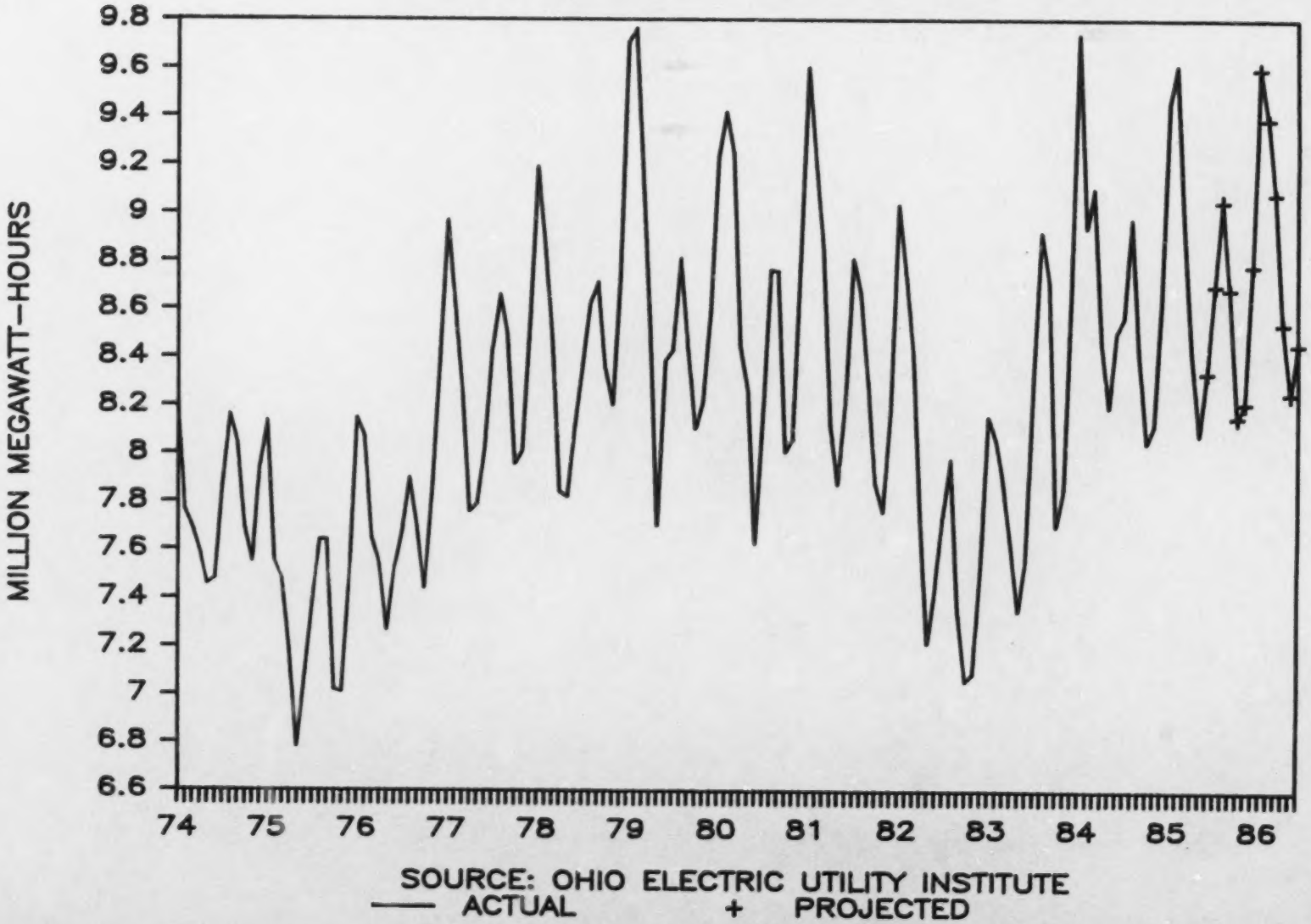
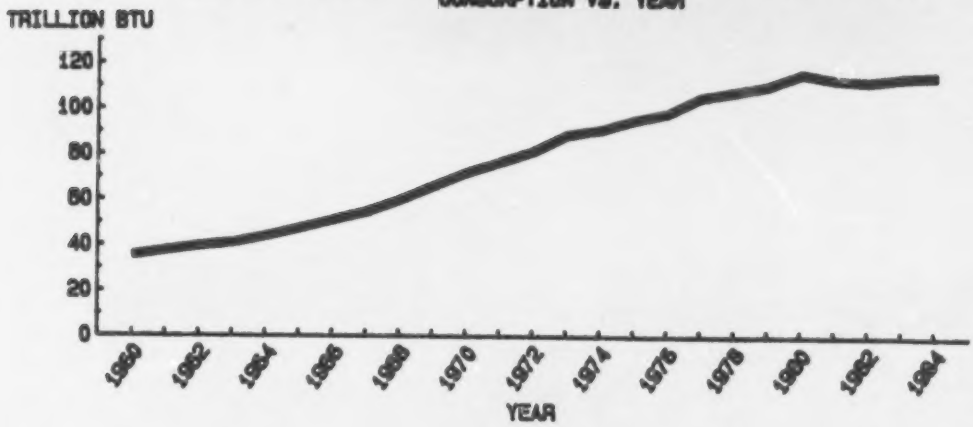
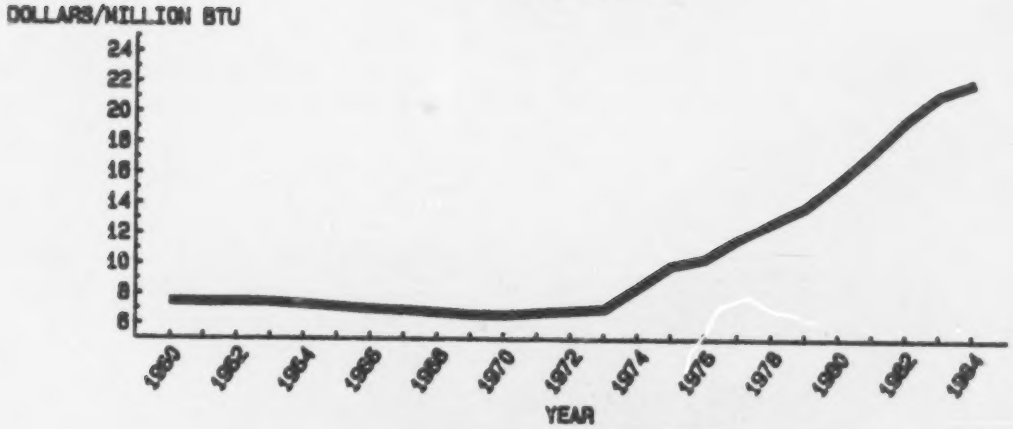


FIG. A-5. ANNUAL OHIO ELECTRIC CONSUMPTION AND PRICES: RESIDENTIAL SECTOR (1960-1984)

CONSUMPTION VS. YEAR



PRICE VS. YEAR



COEFFICIENT OF TRANSFORMATION VS. PRICE

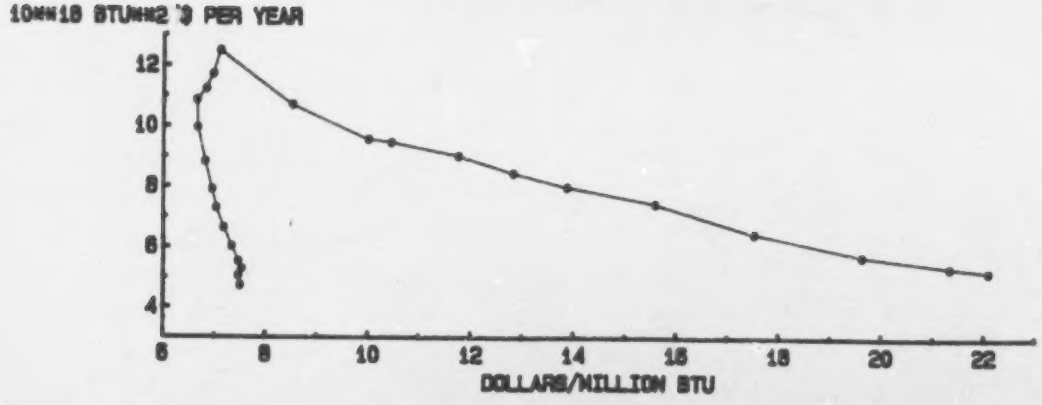
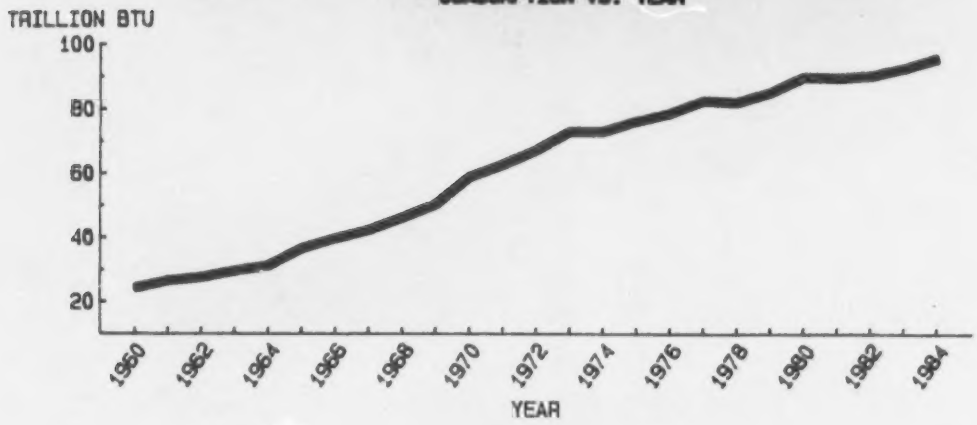
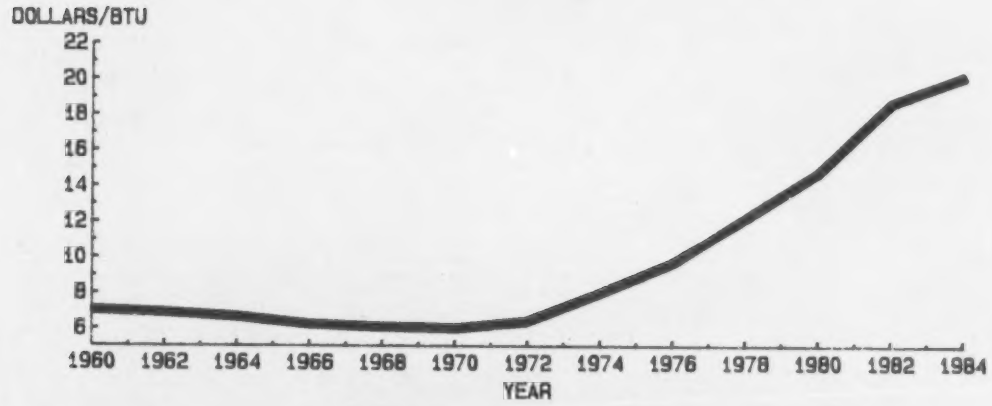


FIG. A-6. ANNUAL OHIO ELECTRIC CONUMPTION AND PRICES: COMMERCIAL SECTOR (1960-1984)

CONSUMPTION VS. YEAR



PRICE VS. YEAR



COEFFICIENT OF TRANSFORMATION VS. PRICE

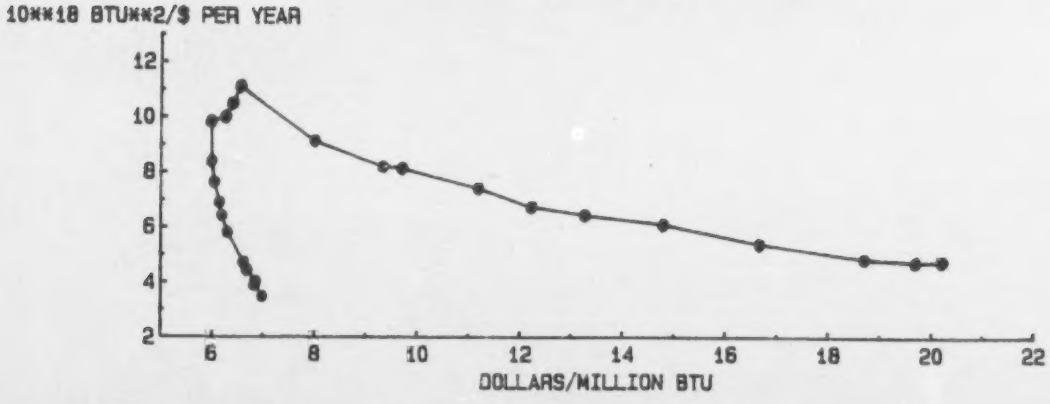
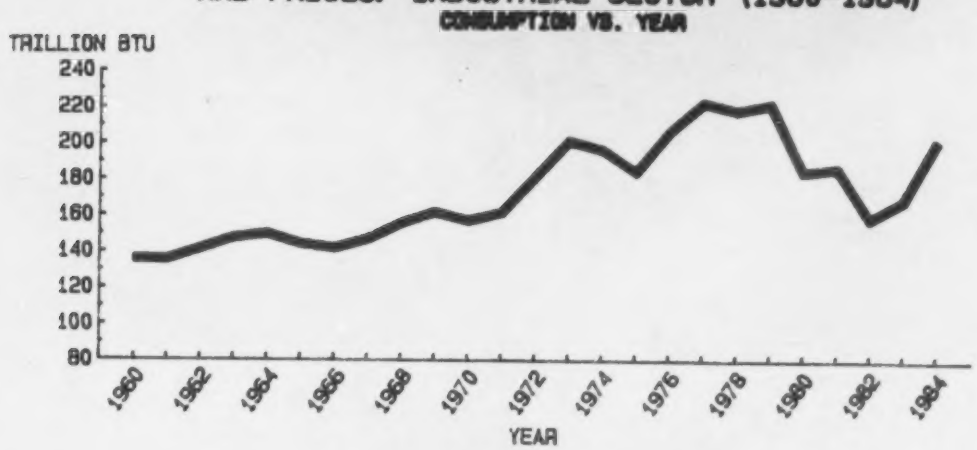
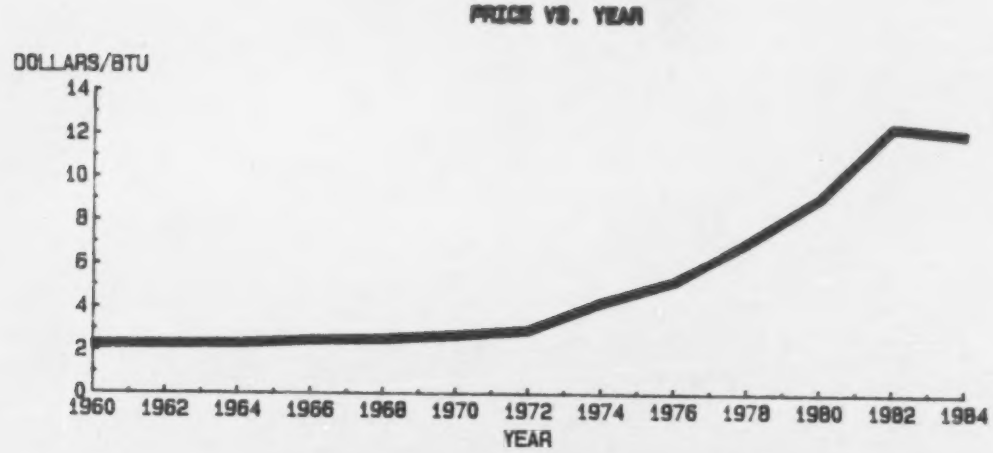


FIG. A-7. ANNUAL OHIO ELECTRIC CONSUMPTION AND PRICES: INDUSTRIAL SECTOR (1960-1984)





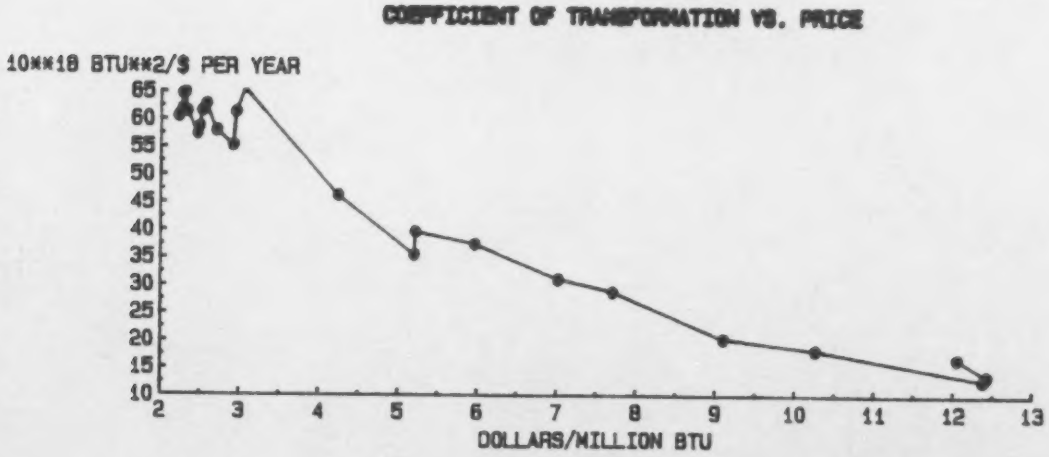
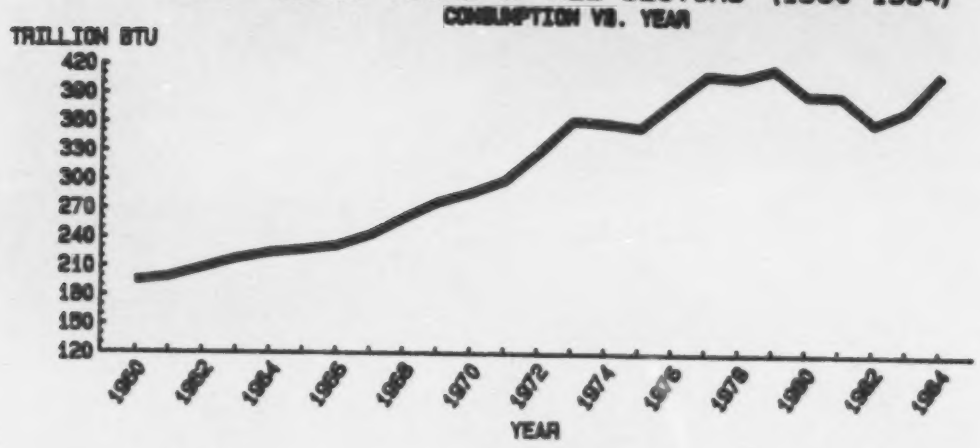
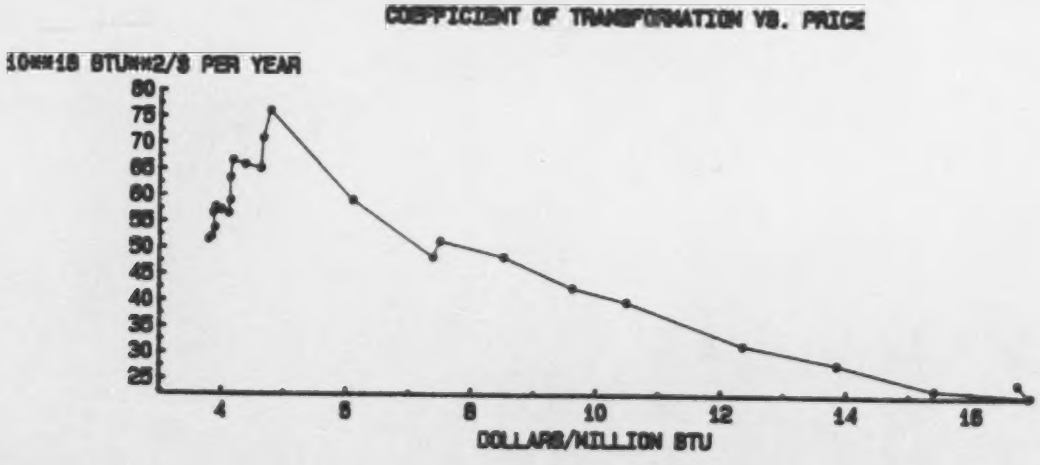


FIG. A-8. ANNUAL OHIO ELECTRIC CONSUMPTION AND PRICES: TOTAL OF ALL SECTORS (1960-1984)





APPENDIX B: NATURAL GAS

Table B-1: Cincinnati Gas and Electric
Forecast of Natural Gas Requirements
(MMCF)

Month	Actual Demand (1984-1985)	Utility Forecast (1985-1986)	%Change (Utility Forecast vs. Actual)	ODOE Forecast (1985-1986)	%Change (ODOE Forecast vs. Actual)
July	2,381	2,411	1.26	2,300	-3.40
August	2,441	2,401	-1.64	2,300	-5.78
September	2,635	2,514	-4.59	2,300	-12.71
October	3,486	3,758	7.80	3,100	-11.07
November	7,991	7,116	-10.95	6,800	-14.90
December	8,328	10,555	26.74	9,500	14.07
January	14,493	12,184	-15.93	12,100	-16.51
February	11,152	10,407	-6.68	12,000	7.60
March	7,345	8,613	17.26	9,000	22.53
April	4,351	5,891	35.39	5,500	26.41
May	2,926	3,833	31.00	3,500	19.62
June	*	2,560	*	2,300	*

*Actual figures were not available.

Source: ODOE Form SG-2. and the Ohio Division of Energy.

Table B-2: Columbia Gas of Ohio
Forecast of Natural Gas Requirements
(MMCF)

Month	Actual Demand (1984-1985)	Utility Forecast (1985-1986)	%Change (Utility Forecast vs. Actual)	ODOE Forecast (1985-1986)	%Change (ODOE Forecast vs. Actual)
July	7,110	5,495	-22.71	6,200	-12.80
August	7,321	6,064	-17.17	6,800	-7.12
September	8,514	6,480	-23.89	6,600	-22.48
October	10,887	11,287	3.67	10,500	-3.55
November	24,979	21,929	-12.21	22,800	-8.72
December	25,524	29,755	16.58	26,700	4.61
January	42,136	35,737	-15.19	41,500	-1.51
February	34,606	30,637	-11.47	39,800	15.01
March	24,227	24,794	2.34	28,500	17.64
April	14,260	16,273	14.12	17,000	19.21
May	7,935	9,596	20.93	12,300	55.01
June	*	5,392	*	7,000	*

*Actual figures were not available.

Source: SG-2. Forms of the reporting utility and the Ohio Division of Energy.

Table B-3: Dayton Power and Light
Forecast of Natural Gas Requirements
(MMCF)

Month	Actual Demand (1984-1985)	Utility Forecast (1985-1986)	%Change (Utility Forecast vs. Actual)	ODOE Forecast (1985-1986)	%Change (ODOE Forecast vs. Actual)
July	1,484	1,301	-12.33	1,500	1.08
August	1,526	1,491	-2.29	1,500	-1.70
September	1,964	1,524	-22.40	1,700	-13.44
October	2,296	2,341	1.96	2,300	0.17
November	4,445	4,889	9.99	40,000	799.89
December	6,309	7,137	13.12	6,600	4.61
January	7,925	8,843	11.58	8,700	9.78
February	10,788	8,704	-19.32	8,800	-18.43
March	5,793	6,044	4.33	6,700	15.66
April	4,131	4,458	7.92	5,000	21.04
May	1,972	2,260	14.60	2,900	47.06
June	*	1,573	*	1,900	*

*Actual figures were not available.

Source: SG-2. Forms of the reporting utility and the Ohio Division of Energy.

Table B-4: East Ohio Gas
Forecast of Natural Gas Requirements
(MMCF)

Month	Actual Demand (1984-1985)	Utility Forecast (1985-1986)	%Change (Utility Forecast vs. Actual)	ODOE Forecast (1985-1986)	%Change (ODOE Forecast vs. Actual)
July	16,548	16,101	-2.70	15,900	-3.92
August	17,344	15,533	-10.44	17,000	-1.98
September	18,697	17,611	-5.81	17,700	-5.33
October	20,128	23,192	15.22	20,000	-0.64
November	26,982	28,471	5.52	27,500	1.92
December	30,282	34,215	12.99	31,000	2.37
January	49,227	39,466	-19.83	45,000	-8.59
February	38,833	35,035	-9.78	35,000	-9.87
March	29,946	28,805	-3.81	30,000	0.18
April	21,984	21,875	-0.50	22,000	0.07
May	18,679	22,495	20.43	23,500	25.81
June	*	17,529	*	16,800	*

*Actual figures were not available.

Source: SG-2. Forms of the reporting utility and the Ohio Division of Energy.

Table B-5: Independent Forecast of Ohio Natural Gas End User Requirements: Residential Sector (MMCF)

Month	Lower 95% Confidence Limit	ODOE Forecast (1985-86)	Upper 95% Confidence Limit	Actual (1984-1985)	Forecast Percentage Change
July	6,200	6,800	7,400	7,053	-3.6
August	6,100	6,700	8,300	6,924	-3.2
September	6,600	7,600	8,600	8,208	-7.4
October	9,800	12,700	15,600	13,111	-3.1
November	17,800	22,800	27,800	23,267	-2.0
December	35,700	41,900	48,100	43,203	-3.0
January	45,400	59,400	71,400	53,278	11.5
February	43,800	53,800	65,800	64,437	-16.5
March	32,700	41,700	49,700	43,841	-4.9
April	23,800	28,800	33,800	29,904	-3.7
May	10,100	16,100	22,100	13,057	23.3
June	8,300	10,500	12,700	*	*

*Actual figures were not available.

Source: ODOE Form SG-1 and the Ohio Division of Energy

FIG. B-1. MONTHLY OHIO RESIDENTIAL NATURAL GAS CONSUMPTION ACTUAL AND PROJECTED (JANUARY 1974 - JUNE 1986)

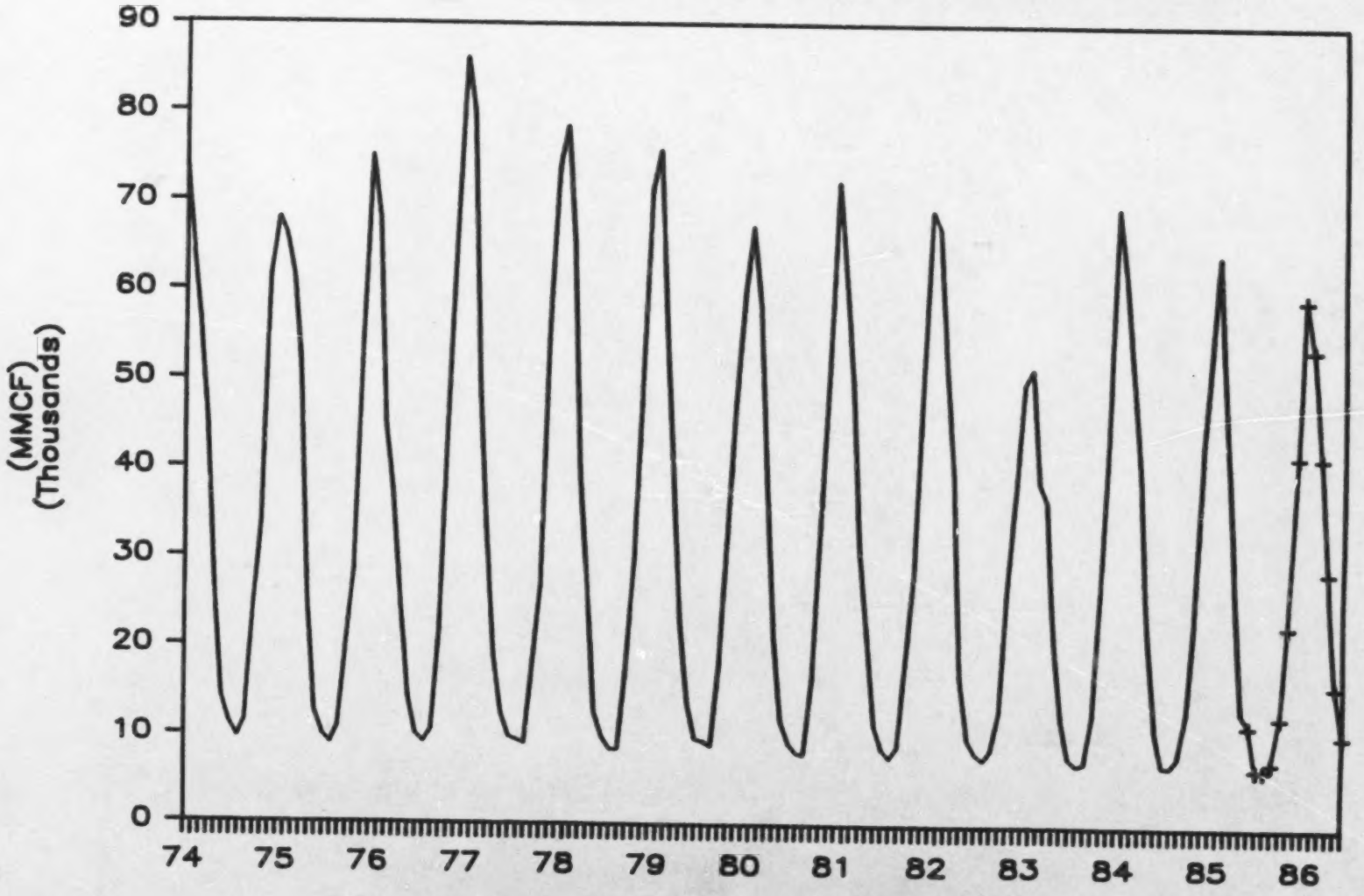


Table B-6: Independent Forecast of Ohio Natural Gas End User Requirements: Commercial Sector (MMCF)

Month	Lower 95% Confidence Limit	ODOE Forecast (1985-86)	Upper 95% Confidence Limit	Actual (1984-1985)	Forecast Percentage Change
July	3,200	3,500	4,000	3,562	-1.7
August	3,000	3,400	3,800	3,480	-2.3
September	3,450	3,600	4,250	3,945	-8.7
October	4,800	5,400	7,200	5,720	-5.6
November	9,000	10,400	14,000	10,729	-3.1
December	16,000	18,600	22,000	19,058	-2.4
January	20,300	25,300	30,300	23,719	6.7
February	19,800	25,800	31,800	28,587	-9.7
March	16,300	19,300	22,300	19,429	-0.7
April	10,400	14,400	17,400	12,787	12.6
May	5,500	7,500	9,500	5,493	36.5
June	4,000	4,600	5,400	*	*

*Actual figures were not available.

Source: ODOE Form SG-1 and the Ohio Division of Energy

FIG. B-2. MONTHLY OHIO COMMERCIAL NATURAL GAS CONSUMPTION ACTUAL AND PROJECTED (JANUARY 1974 - JUNE 1986)

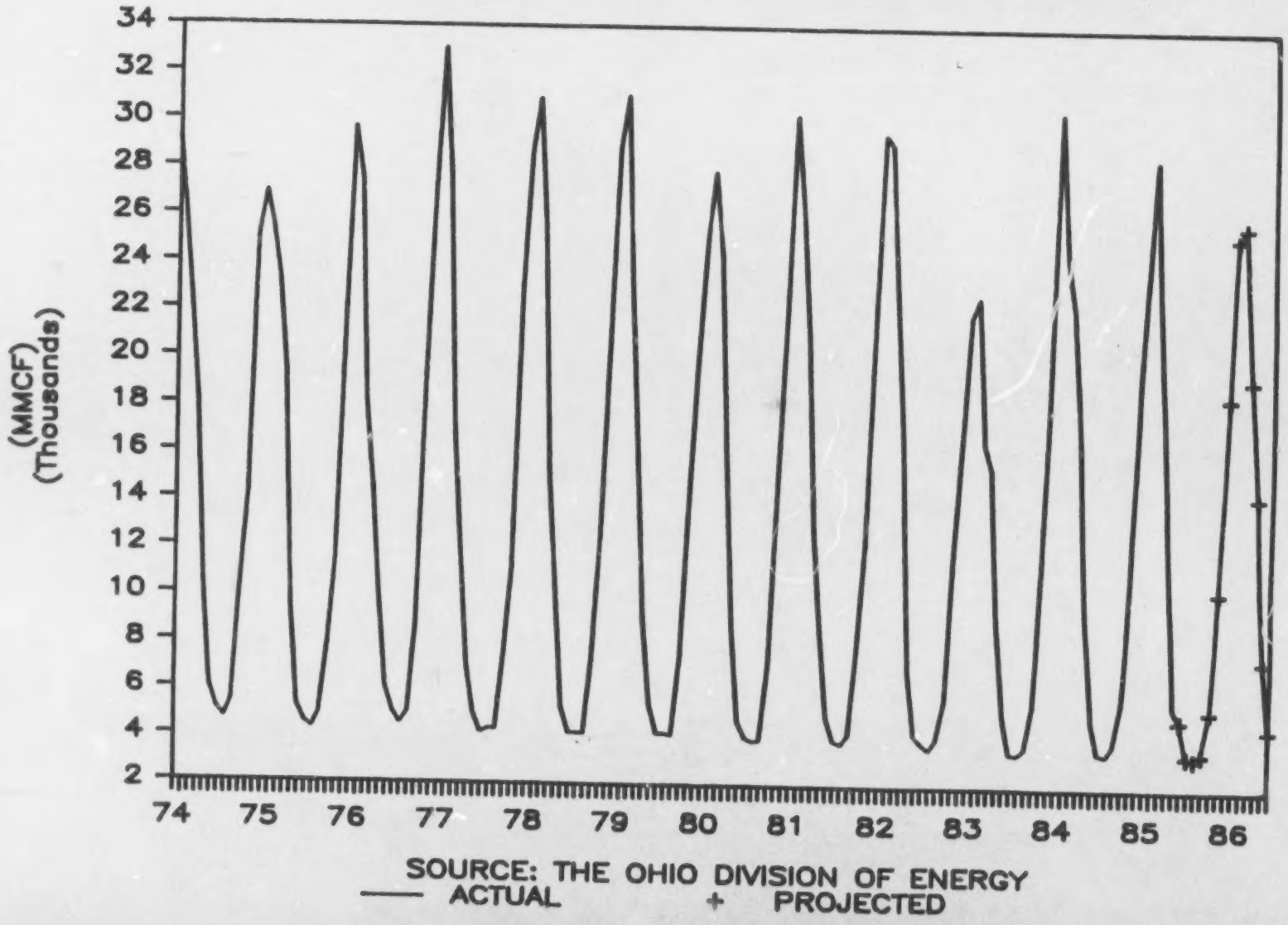


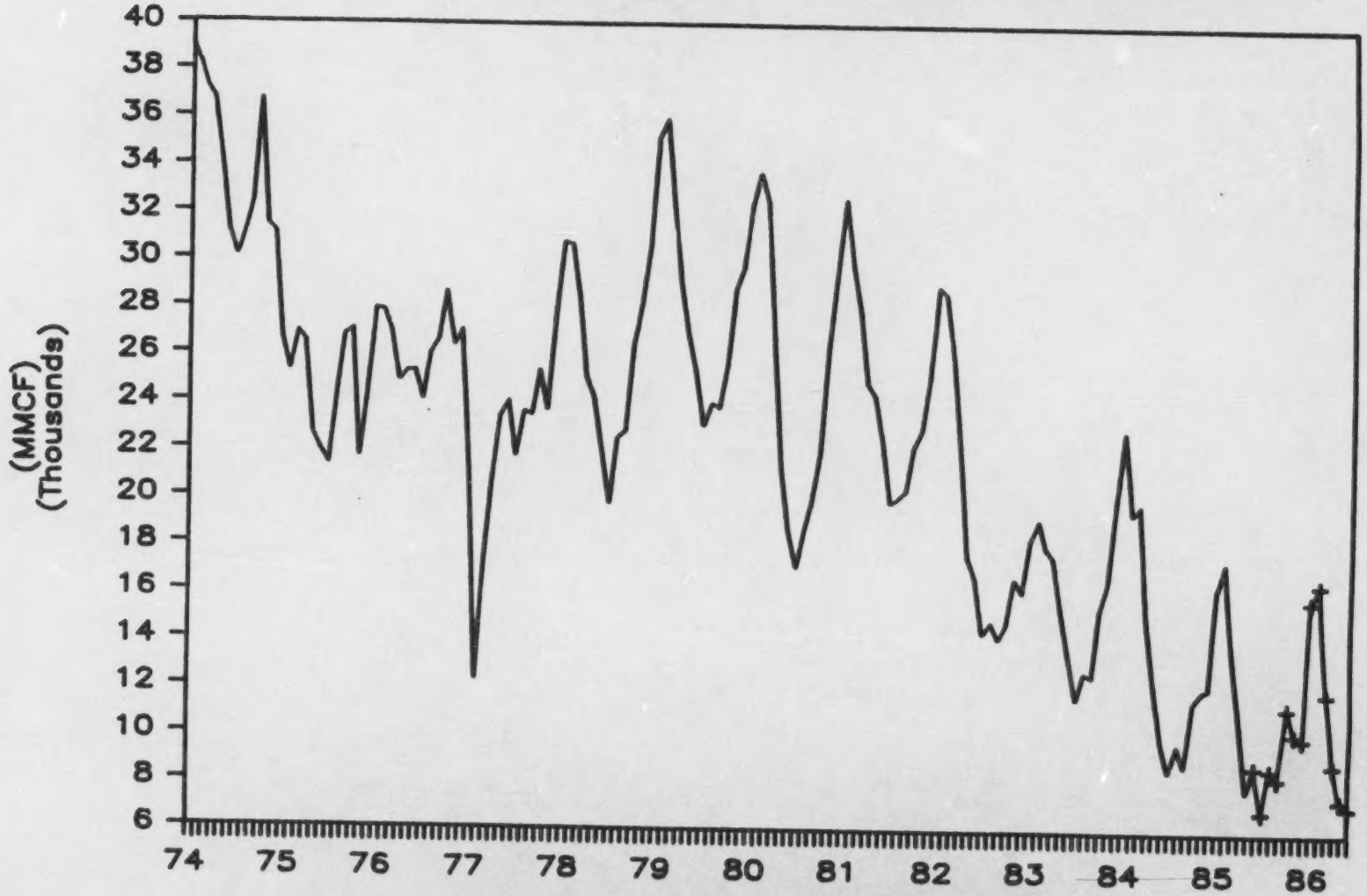
Table B-7: Independent Forecast of Ohio Natural Gas End User Requirements: Industrial Sector (MMCF)

Month	Lower 95% Confidence Limit	ODOE Forecast (1985-86)	Upper 95% Confidence Limit	Actual (1984-1985)	Forecast Percentage Change
July	5,000	7,000	11,000	8,644	-19.0
August	6,500	8,800	12,800	9,794	-10.1
September	6,400	8,400	11,400	8,839	-5.0
October	8,400	11,400	15,400	11,632	-2.0
November	6,400	10,300	14,300	12,052	-14.5
December	13,000	10,100	14,100	12,214	-17.3
January	11,900	15,900	20,900	16,390	-3.0
February	10,600	16,600	22,600	17,473	-5.0
March	8,000	12,000	17,000	13,467	-10.9
April	6,000	9,000	15,000	10,570	-14.9
May	5,500	7,500	12,500	7,817	-4.1
June	4,200	7,200	12,200	*	*

*Actual figures were not available.

Source: ODOE Form SG-1 and the Ohio Division of Energy

FIG. B-3. MONTHLY OHIO INDUSTRIAL NATURAL GAS CONSUMPTION
ACTUAL AND PROJECTED (JANUARY 1974 - JUNE 1986)



SOURCE: THE OHIO DIVISION OF ENERGY
—— ACTUAL + PROJECTED

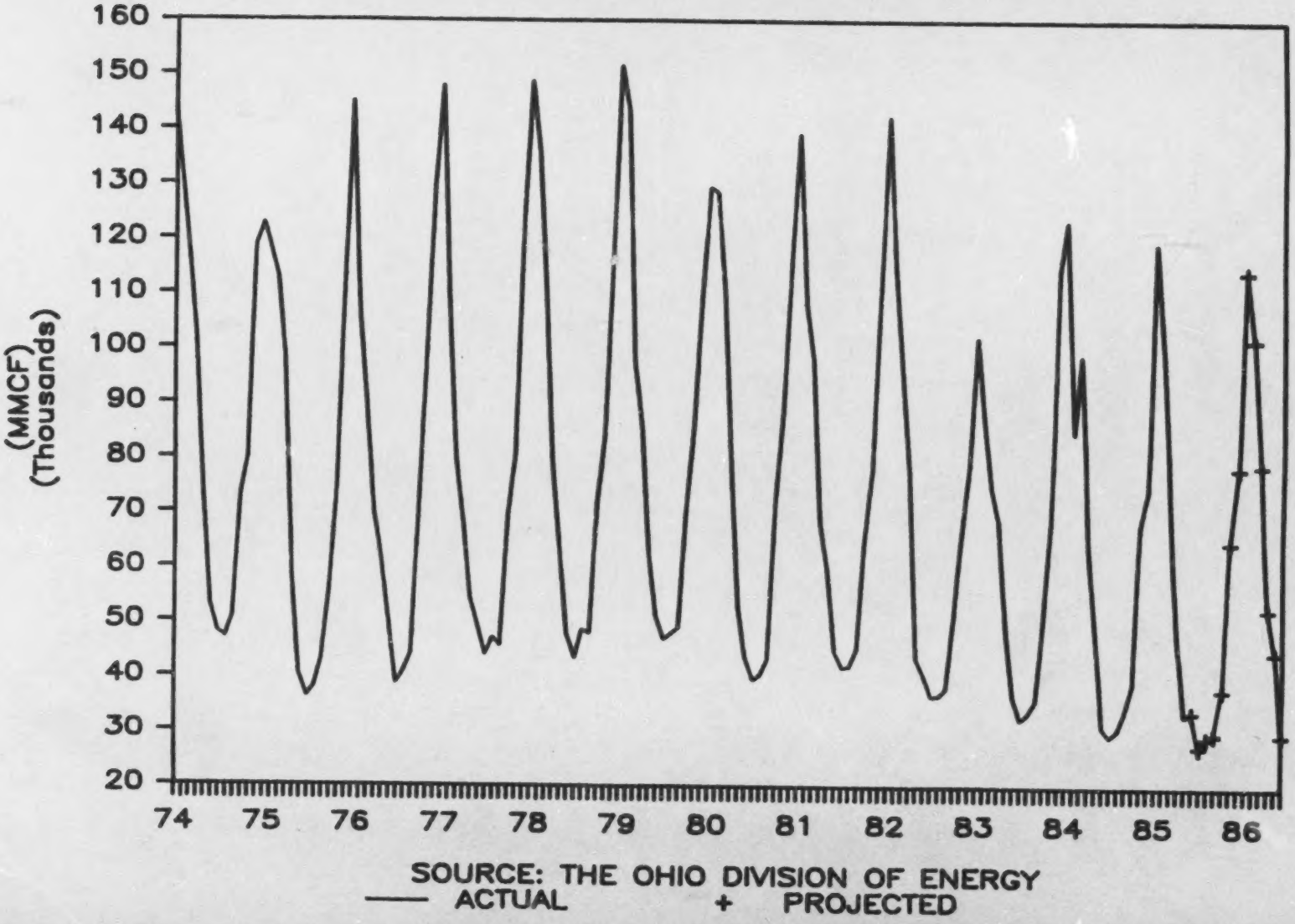
Table B-8: Independent Forecast of Ohio Natural Gas End User Requirements: All Sectors (MMCF)

Month	Lower 95% Confidence Limit	ODOE Forecast (1985-86)	Upper 95% Confidence Limit	Actual (1984-1985)	Forecast Percentage Change
July	17,600	27,600	37,600	29,425	-6.2
August	21,400	29,400	37,400	30,744	-4.4
September	24,100	30,100	36,100	34,062	-11.6
October	21,200	38,200	54,200	39,345	-2.9
November	55,100	65,100	75,100	68,144	-4.5
December	61,600	78,600	97,600	74,445	5.6
January	94,300	114,300	134,300	119,462	-4.3
February	84,800	101,800	119,800	100,148	1.6
March	71,000	79,000	87,000	70,822	11.5
April	42,700	52,700	62,700	47,092	11.9
May	30,000	44,900	54,900	33,284	34.9
June	21,800	29,800	37,800	*	*

*Actual figures were not available.

Source: ODOE Form SG-1 and the Ohio Division of Energy

FIG. B-4. MONTHLY TOTAL OHIO NATURAL GAS CONSUMPTION
ACTUAL AND PROJECTED (JANUARY 1974 - JUNE 1986)



SOURCE: THE OHIO DIVISION OF ENERGY
—— ACTUAL + PROJECTED

TABLE B-9 PROJECTED SUPPLY AND DEMAND FOR EIGHT MAJOR OHIO NATURAL GAS UTILITIES (MMCF)

COMPANY: CINN. GAS & ELEC.

PROJECTED SUPPLY AND DEMAND (IN MMCF)

MONTH/YEAR	5/85	6/85	7/85	8/85	9/85	10/85	11/85	12/85	1/86	2/86	3/86	4/86	SUMMER	WINTER	YEAR
SUPPLY	3908	2778	2679	2401	2514	3758	7116	10555	12184	10407	8613	5891	23921	48875	72796
DEMAND	3908	2778	2679	2401	2514	3758	7116	10555	12184	10407	8613	5891	23921	48875	72796
DEFICIENCY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% DEFICIENCY	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

COMPANY: COLUMBIA GAS

PROJECTED SUPPLY AND DEMAND (IN MMCF)

MONTH/YEAR	5/85	6/85	7/85	8/85	9/85	10/85	11/85	12/85	1/86	2/86	3/86	4/86	SUMMER	WINTER	YEAR
SUPPLY	11033	7141	6916	7561	8315	12840	21929	29755	35737	30637	24794	16273	70879	142852	212931
DEMAND	11033	7141	6916	7561	8315	12840	21929	29755	35737	30637	24794	16273	70879	142852	212931
DEFICIENCY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% DEFICIENCY	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

COMPANY: DAYTON POWER & LIGHT

PROJECTED SUPPLY AND DEMAND (IN MMCF)

MONTH/YEAR	5/85	6/85	7/85	8/85	9/85	10/85	11/85	12/85	1/86	2/86	3/86	4/86	SUMMER	WINTER	YEAR
SUPPLY	2325	1503	1502	1648	1612	2678	4643	6937	8439	8398	5708	4532	15800	34125	49925
DEMAND	2325	1503	1502	1648	1612	2678	4643	6937	8439	8398	5708	4532	15800	34125	49925
DEFICIENCY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% DEFICIENCY	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

COMPANY: EAST OHIO GAS

PROJECTED SUPPLY AND DEMAND (IN MMCF)

MONTH/YEAR	5/85	6/85	7/85	8/85	9/85	10/85	11/85	12/85	1/86	2/86	3/86	4/86	SUMMER	WINTER	YEAR
SUPPLY	25233.	20567	19425	19371	20462	26161	27330	36260	41572	36878	28885	21875	153094	170045	323139
DEMAND	25233	20567	19425	19371	20462	26161	27330	36260	41572	36878	28885	21875	153094	170045	323139
DEFICIENCY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% DEFICIENCY	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

TABLE B-9 PROJECTED SUPPLY AND DEMAND FOR EIGHT MAJOR OHIO NATURAL GAS UTILITIES (MMCF)

COMPANY: NATIONAL GAS

PROJECTED SUPPLY AND DEMAND (IN MMCF)

MONTH/YEAR	5/85	6/85	7/85	8/85	9/85	10/85	11/85	12/85	1/86	2/86	3/86	4/86	SUMMER	WINTER	YEAR
SUPPLY	1199	1192	1175	1333	1300	1258	1267	1352	1629	1514	1053	928	8385	6815	15200
DEMAND	840	1192	1175	1333	1300	1258	1267	1352	1629	1514	1053	928	8826	6815	14841
DEFICIENCY	-359	0	0	0	0	0	0	0	0	0	0	0	-359	0	-359
% DEFICIENCY	-42.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-4.5%	0.0%	-2.4%

COMPANY: OHIO GAS

PROJECTED SUPPLY AND DEMAND (IN MMCF)

MONTH/YEAR	5/85	6/85	7/85	8/85	9/85	10/85	11/85	12/85	1/86	2/86	3/86	4/86	SUMMER	WINTER	YEAR
SUPPLY	335	218	215	238	324	508	696	921	916	882	758	524	2362	4173	6535
DEMAND	335	218	215	238	324	508	696	921	916	882	758	524	2362	4173	6535
DEFICIENCY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% DEFICIENCY	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

COMPANY: RIVER GAS

PROJECTED SUPPLY AND DEMAND (IN MMCF)

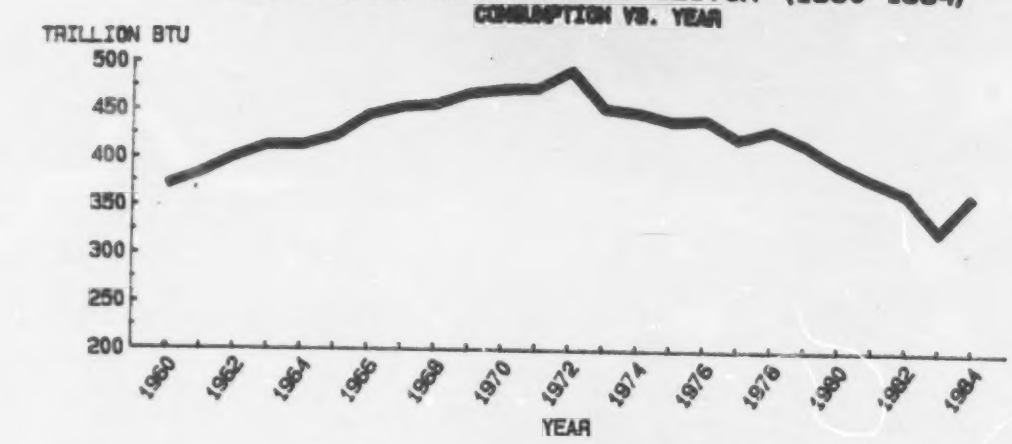
MONTH/YEAR	5/85	6/85	7/85	8/85	9/85	10/85	11/85	12/85	1/86	2/86	3/86	4/86	SUMMER	WINTER	YEAR
SUPPLY	215	183	173	159	174	381	426	579	671	567	459	326	1531	2702	4233
DEMAND	215	183	173	159	174	381	426	579	671	567	459	326	1531	2702	4233
DEFICIENCY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% DEFICIENCY	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

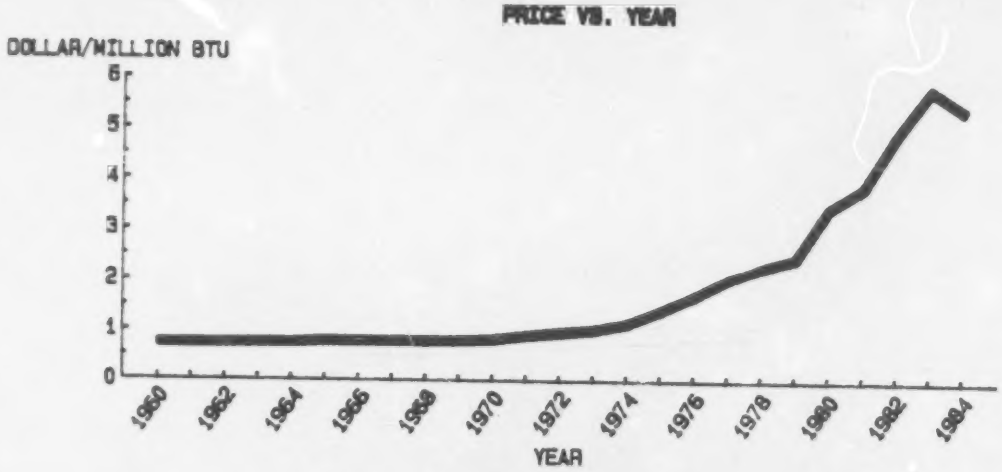
COMPANY: WEST OHIO GAS

PROJECTED SUPPLY AND DEMAND (IN MMCF)

MONTH/YEAR	5/85	6/85	7/85	8/85	9/85	10/85	11/85	12/85	1/86	2/86	3/86	4/86	SUMMER	WINTER	YEAR
SUPPLY	532	435	288	381	422	887	1212	1505	2013	1858	1442	927	3864	8030	11894
DEMAND	532	435	288	381	422	887	1212	1505	2013	1858	1442	927	3864	8030	11894
DEFICIENCY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% DEFICIENCY	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

FIG. B-5. ANNUAL OHIO NATURAL GAS CONSUMPTION AND PRICES: RESIDENTIAL SECTOR (1960-1984)





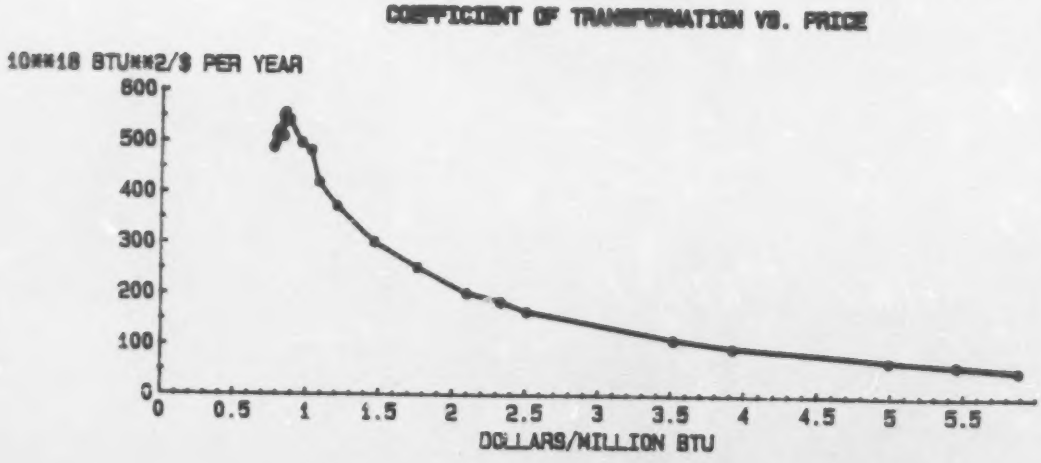
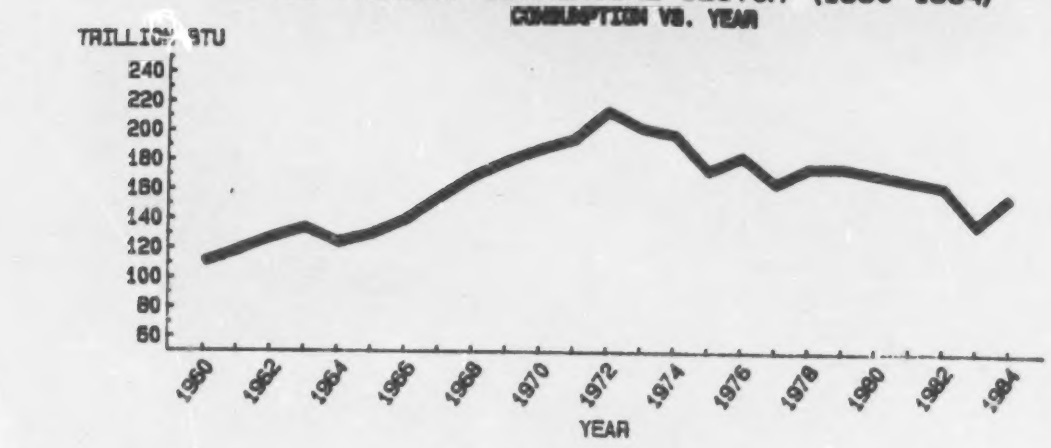
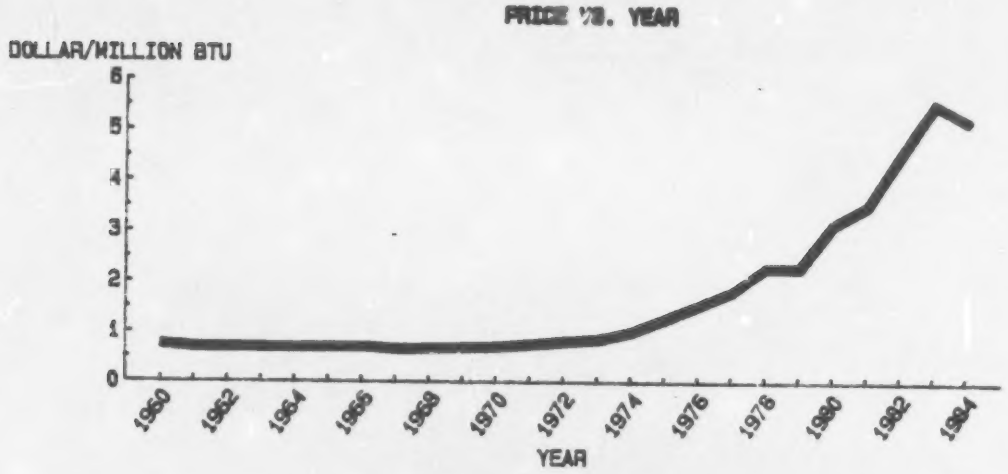


FIG. B-6. ANNUAL OHIO NATURAL GAS CONSUMPTION AND PRICES: COMMERCIAL SECTOR (1960-1984)





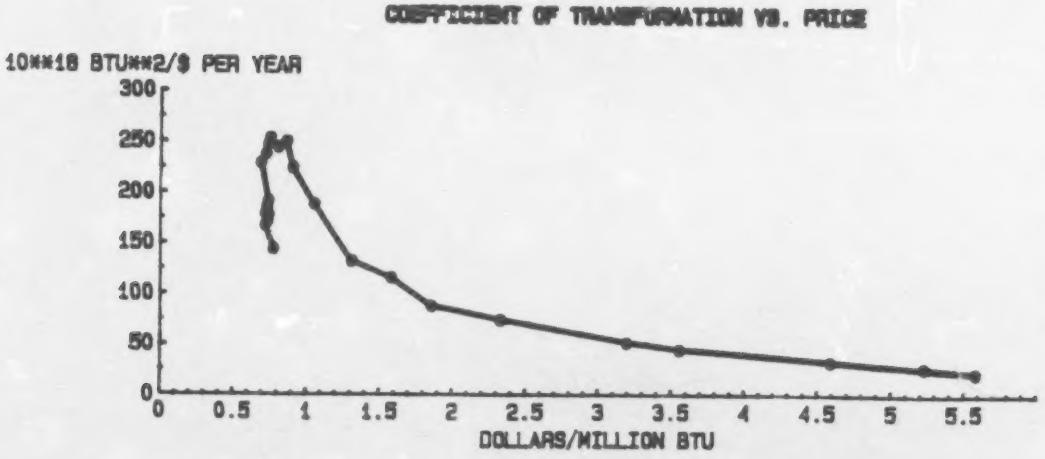
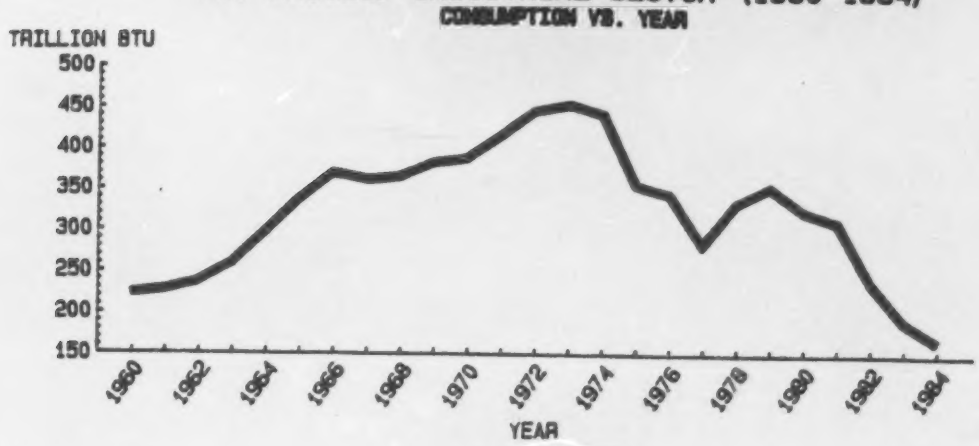
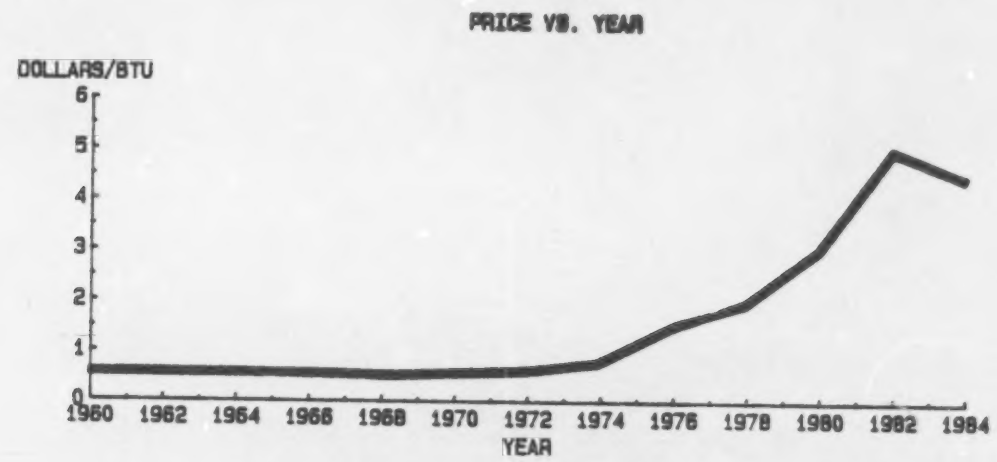


FIG. B-7. ANNUAL OHIO NATURAL GAS CONSUMPTION AND PRICES: INDUSTRIAL SECTOR (1960-1984)





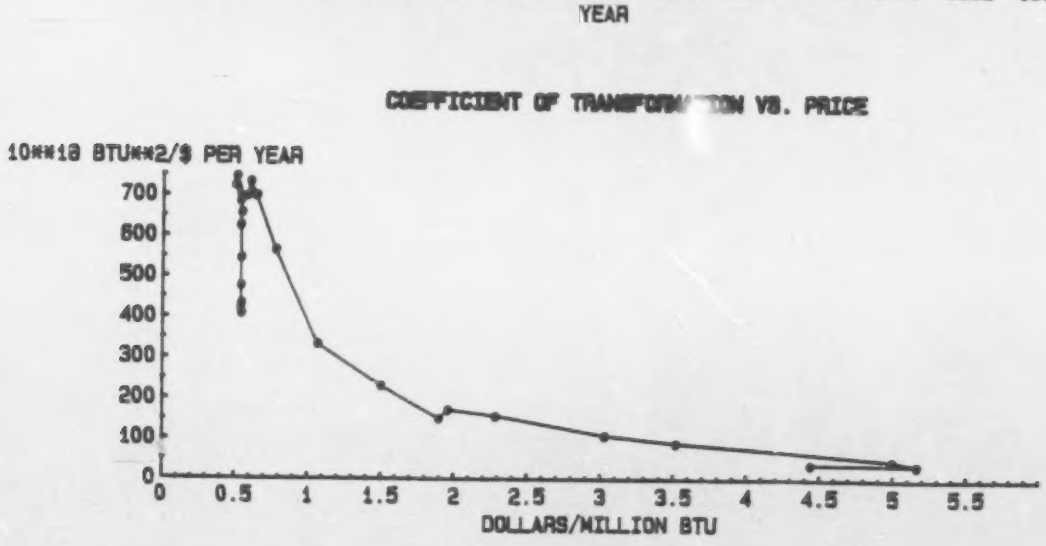
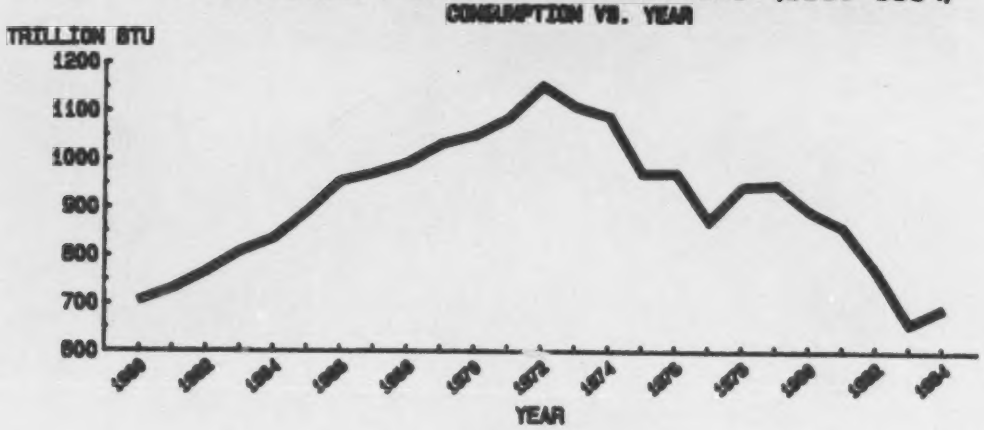
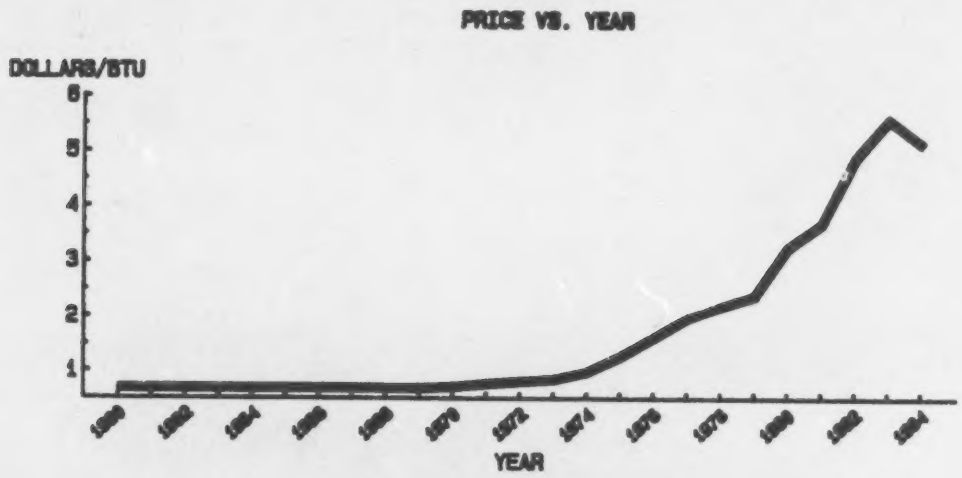


FIG. B-8. ANNUAL OHIO NATURAL GAS CONSUMPTION AND PRICES: TOTAL OF ALL SECTORS (1960-1984)





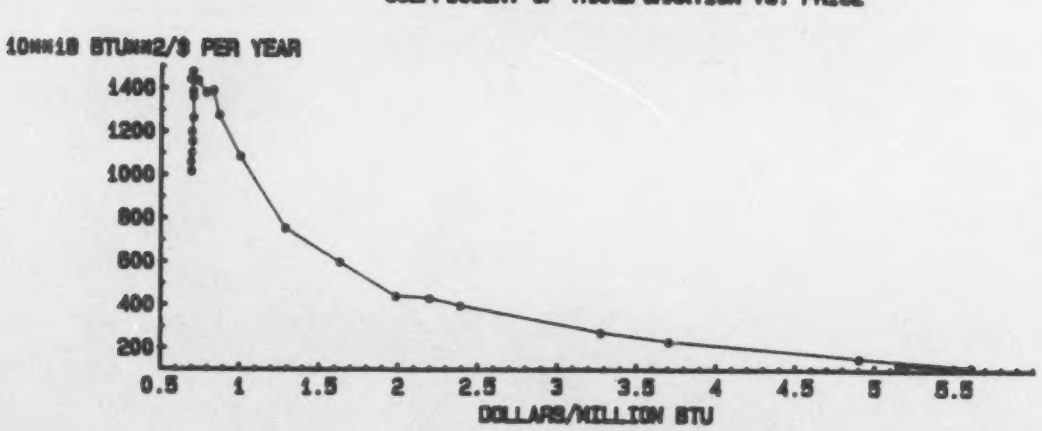


FIG. B-9. ANNUAL OHIO NATURAL GAS CONSUMPTION BY SECTOR

(1960 - 1984)